The OIL and GAS JOURNAL

PRODUCING REFINING MARKETING

VOL. 23. No. 11-A TULSA, OKLAHOMA, AUGUST 7, 1924

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Crude Production at New Peak for Year

Average daily production in United States week ended Aug. 2, 2,030,811 bbls. Gain over previous week, 18,880 bbls.

Output of All Fields Shows Substantial Gain With the Probability of Further Increase for This Week

By Andrew M. Rowley

Highest daily average estimated production this year, week ended Aug. 2, 2,030,811 bbls. Lowest, January 12, 1,871,143 bbls.

Production of crude petroleum in the United States reached a new high level for this year during the past week when it averaged 2,030,811 barrels daily, an increase of more than 11,000 barrels a day over the previous high mark reached in the week ending July 5. In addition to the gain of nearly 19,000 barrels a day recorded last week as compared to the week before, indications were another increase would be registered for this week, the production of Oklahoma alone on Monday of this week being more than 8,000 barrels a day greater than the average given for last week.

Much of the increase in Oklahoma during the past week came from the Cromwell Field where new wells and the agitation of wells already producing sent the production there up to 60,000 barrels daily on Monday of this week. The deep sand area at Tonkawa furnished a big well during the past week and gave concrete evidence of what may be expected from that formation when the many wells now drilling towards it reach the sand. McCaskey & Wentz' No. 45 McKee started at 189 barrels an hour, increased to 240 barrels hourly and settled to 190 barrels an hour. The new well is the largest producer from the recently discovered deep sand at Tonkawa.

There was a feeling further reductions in the price of crude oil might be expected if the trend of production continued upward. This feeling was strengthened on Tuesday when a cut of 25 cents a barrel was announced for all grades of Pennsylvania crude with smaller reductions for other eastern crudes. Production in the Mid-Continent area is increasing and shows no signs of falling off. Newly discovered sands in old producing fields are being found highly productive and completions in other areas are offsetting the natural declines in output of old wells.

California is not showing the decline which had been expected. The Dominguez Field there is an important factor in holding up the output and the trend of production in California right at this time might be said to be upward. One completion at Dominguez during the past week started at 1,200 barrels a day but water broke in and the well was killed until the source of the water might be determined. Torrance and Long Beach held up well during the past week.

PRODUCTION IN THE UNITED STATES

Estimated daily average production in the oil fields of the United States for the week ended Aug. 2 and a comparison with previous week follows:

Oklahoma—Northern Fields	Aug. 2	July 26
Tonkawa	38,092	37,715
Burbank	80,300	85,100
Other Osage Fields	51,500	50,350
Cushing and Shamrock	23,800	23,850
Bristow and Eastern Bristow	50,050	50,380
Cromwell	54,860	49,665
Stroud	19,160	17,080
Northern Miscellaneous	103,995	102,990
Southern Fields	71,015	71,480
Total Oklahoma	492,772	488,610
North Louisiana	56,645	56,390
Arkansas—		
El Dorado and Calion	12,840	12,825
Smackover Light	37,620	37,715
Smackover Heavy	84,250	92,860
Stephens and Nevada	3,660	3,685
Total Arkansas	148,370	147,085
North Central Texas	122,615	123,409
East Central Texas, (Mexia, Currie, Corsicana, Powell)	131,556	127,581
Kansas	83,750	81,865
Total Mid-Continent Area	1,035,708	1,024,940
Gulf Coast	84,400	82,140
Southwest Texas	52,163	51,696
Eastern	106,950	107,425
Wyoming-Montana	126,590	123,730
California—		
Santa Fe Springs	56,000	57,000
Long Beach	155,000	155,000
Huntington Beach	43,000	44,000
Torrance	56,000	56,000
Dominguez	22,000	20,000
Remainder of State	293,000	290,000
Total California	625,000	622,000
Total United States	2,030,811	2,011,931

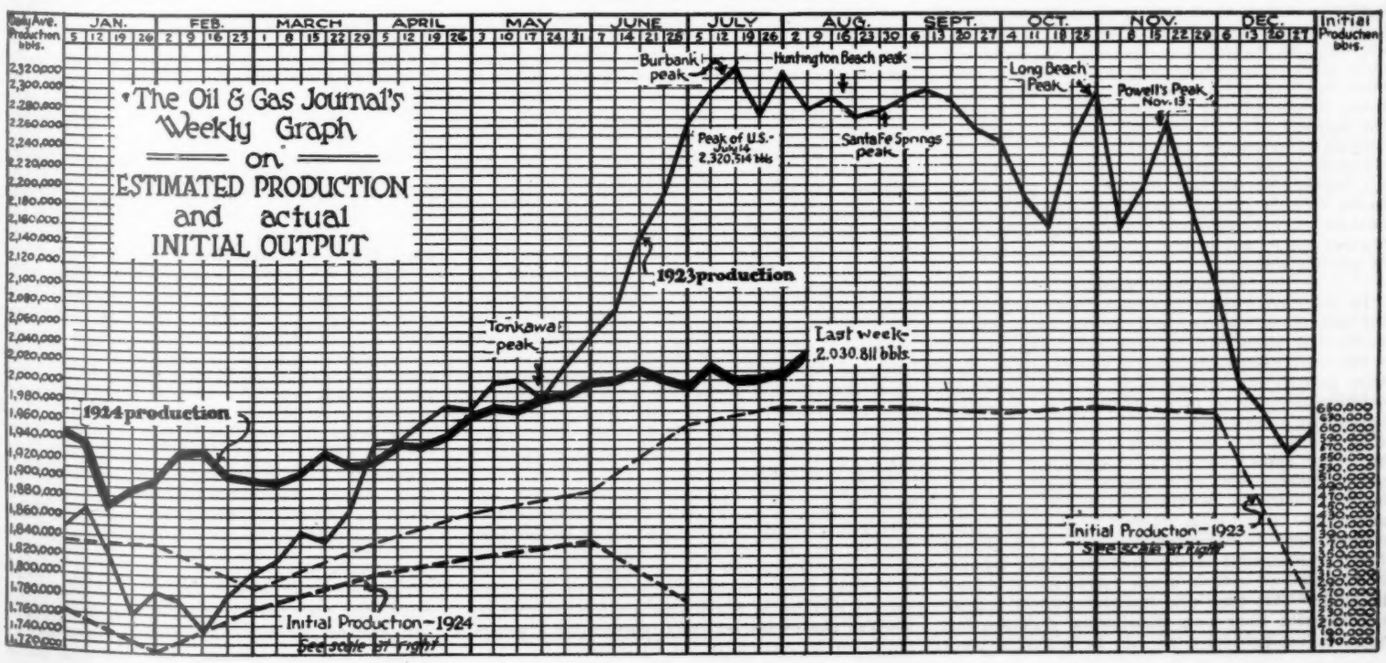
INCREASE, 18,880 BARRELS

Oklahoma is probably the most important factor in the present crude situation. For a long time it was felt there was little chance the peak of production of last year, estimated at 527,000 barrels a day, would be reached this year but operators are changing their minds on this point. With 41 wells drilling to the deep sand at Tonkawa and the newest completion in that sand making more than 4,800 barrels daily, it is not hard to figure the possibilities held in that area alone. Other pools in Oklahoma are holding up their output remarkably well and big wells are more or less of a common occurrence throughout the producing areas of the State. Stroud, which had been declining for several weeks, staged a comeback last week and increased its estimated daily output more than 2,000 barrels.

Kansas, too, is getting into the swing and early this week another well was completed in the district about 10 miles west of Independence, in Montgomery County, which is regarded as equally as good as the well brought in there several weeks ago which started at 4,000 barrels daily and is still making 1,600 barrels a day. Another well was to be completed in the same district within a day or so. The Rainbow Bend Pool, in Cowley County, Kansas, averaged about 7,200 barrels a day last week.

Following the recording of favorable indications by the Eotvos torsional balance, the Rycade Petroleum Company started drilling about 5½ miles east of Damon Mound in the Gulf Coast section and at 630 feet drilled into some rock salt which may indicate the presence of another saline dome in that territory. New production in Gulf Coast pools totalled 11,665 barrels last week, the largest amount for several months. In the Luling area, gas was found in a test a mile northwest of production on the Guadalupe County side of the field and developments there are being watched closely.

Considered as a whole, the trend of crude production in the United States seems to be on the upward trend at this time and no material decline in output may be expected in the near future. This means the industry must face the necessity of going into the winter with large quantities of crude and refined oils in storage. These stocks have been the determining factor in depressing prices but as long as production continues at its present level, no improvement in this situation can be expected.



Independent Jobbers' Place in Industry

Figures From Official Records of Several States Show as a Class They Market From 1.98 to 39.08 Per Cent of Gasoline

By C. O. Willson

What part does the independent jobber play in the wholesaling and retailing of gasoline?

This question is often answered with the statement that jobbers handle more than 50 per cent of the gasoline sold to domestic consumers in the United States. Both State and national associations of jobbers have on several occasions pointed with pride to the supposed fact that they as a body represent more than half of the gasoline distributing end of the oil industry.

An investigation into the soundness of this claim is particularly timely now, due to recent developments within the oil industry which again brought an abnormally wide spread in several sections between the price obtained by the independent refiner at his plant from the jobber and the price secured by the latter from the consuming public either through bulk or service stations. Reflecting this situation there have been numerous "price wars" brought about in practically all instances by independent jobbers or city and State officials, the latter occupying the same position as the former in that they have been able to buy at bargain prices from the refiner who did not have his own distributing stations.

Exaggerated Claims

It is apparent from the accompanying table that the position of the independent jobber considered as a unit in the wholesaling and retailing of gasoline has been greatly exaggerated in the statements previously mentioned. The writer believes that this has been partially due to the fact that there is confusion as to terms both in the public mind and among many within the oil industry as to just what constitutes an independent jobber of gasoline and other refined products. In common use the phrase "independent jobber" often covers all marketing except that of the several Standard Companies. In that sense as shown by the accompanying table the statement that independent jobbers market more than half of the gasoline sold in the United States would not be far from wrong.

Herein lies a misunderstanding, the significance of which is little realized even by those engaged in the marketing of refined products. Independent jobbers, accustomed from the early stages of the oil industry to consider the Standard units as their only real competition, have felt secure in the feeling that the Standard Companies had presumably only been able to hold their own in the marketing of refined products during the past few years. This feeling was also supported by the fact that more and more concerns have been entering the jobbing business, especially during the past two years, strengthening, it was believed, the position of the independent industry as a whole. The fact that there has been an exceptionally wide margin to the jobber on which to operate, regardless of whether he bought his supplies on the spot market or on a marginal contract based on tank wagon schedules, was also an additional factor in the conclusion that the independent jobber was making progress at the expense of his "big competitor."

Meaning of Terms

In order that there will be no confusion as to the meaning of the data used in the accompanying tables, the terms will be explained. The Class 1 or Standard Companies refers to all companies which were part of the Standard Oil Company previous to the dissolution in 1911 and which are commonly recognized in marketing circles at the present time. It covers not only the Standard Companies proper but other units such as the Continental Oil Company, Atlantic Refining Company, Magnolia Petroleum Company and the Humble Oil & Refining Company. The second class referred to as "Other Complete Companies" covers all companies not Standard which are engaged in the production and refining of crude oil as well as in the marketing of refined products. This class also includes refinery organizations with their own distributing facilities but which do not produce crude oil. In this class comes such companies as the Gulf, Pure, Shell and Sinclair. The third class of "Independent Jobbers" refers to those who buy their gasoline from refiners at tank car prices and dispose of it at the tank wagon and service station prices.

WHO SELLS THE GASOLINE?

Table showing percentage of gasoline wholesaled and retailed in nine States by the three classes; (1) by Standard Companies; (2) companies engaged either in the production and refining of crude oil or both as well as in the marketing of refined products and (3) independent jobbers:

State—	(1) Standard Cos.	(2) Other Complete Cos.	(3) Independent Jobbers
Florida	45.41%	52.51%	1.98%
Nevada	57.48	32.10	10.42
Vermont	77.06	4.83	18.11
Washington	53.25	43.13	3.62
Arkansas	35.34	26.65	38.01
North Dakota	66.1	8.51	25.29
South Dakota	52.73	16.99	30.28
Montana	38.02	27.47	34.51
Nebraska	32.1	28.82	39.08
Average	50.83%	26.78%	22.37%

Note: Above percentages based on State reports. Where available the percentages were based on reports covering gasoline sales for the entire year of 1923. In other cases the data is based on monthly reports issued since January 1, 1924. In the case of North Dakota the average percentage for January and February, 1924, was used.

The table was derived from official State reports. Recent issues of The Oil and Gas Journal have given these reports in detail showing the amount of gasoline sold by each company based on reports made to State departments charged with the responsibility of collecting inspection taxes or gasoline road taxes. Where available the report for the entire year of 1923 was used in order to get away from the the month to month fluctuations which, however, were found to make only minor differences in the percentages credited to the three classes as given in the table.

Where any doubt existed as to just what class the gasoline sales of a company belonged they were given to the "Independent Jobbers." For instance, the Montana report gave only the sales made by refiners within the State and outside distributing companies such as Continental Oil Company. At least three refiners within the State sell part of their gasoline output through their own wholesale and retail distributing facilities. There was no way of determining just what percentage of their entire output was sold in this manner, however, and so all their sales were credited to the independent jobbers to whom they sold the bulk of their output. If these sales could have been separated there would have been a substantial reduction in the percentage credited to the "Independent Jobbers" which would have been added to the class "Other Complete Companies." Largely the same situation applied to Nebraska.

The nine States given in the table were used because they were the only States whose reports giving the desired data, were available at this time. Fortunately, the States are scattered throughout the United States and for that reason the units for individual States probably approximate conditions for the sections in which they are located with the average figures not far from representing a general condition for the entire United States.

The table shows a wide variance in the part all three classes play in the tank wagon and service station prices of gasoline in the several States. For instance, the Standard Companies market 32.1 per cent of the gasoline in Nebraska and 77.06 per cent in Vermont. The low for the other complete companies was in Vermont where the percentage was 4.83 per cent with the high in Florida where they market 52.51 per cent of the gasoline. The independent jobbers have a low of 1.98 per cent in Florida and a high of 39.08 per cent in Nebraska.

Divided as to sections the table shows in a general way that Standard and other complete companies—Classes 1 and 2—are strongest in the East, Southeast and West Coast with the greatest strength of the independent jobbing interests in the inland States centering in the States of the Middle West. The explanation of this situation probably lies in the fact that the major companies have a special advantage along the coast due to their facilities for water transportation. There is also the further fact that the jobbers located at inland points have had a consistent source of supply from the Mid-Continent, the center of the independent refining industry. The great bulk of the refinery output in the hands of companies engaged in all phases of the oil industry, is located either along the East, West or Gulf Coast in order that advantage may be taken of water shipment both for domestic and export trade. Large companies with rare exceptions have their own marketing facilities and, due to the condition just outlined, it is not surprising that the tendency has been to concentrate their marketing business as near the coast as possible.

Indications of Trend

The future economic importance of the situation shown in the table should be apparent to every one and is especially significant to the independent jobber. No data are available covering the States given in the table over a period of several years. There can be no doubt, however, in the struggle for gallonage in the wholesaling and retailing of gasoline, the independent jobbers have not been able to hold their own with their larger competitors engaged in all branches of the oil industry. The Standard Companies have at least been able to hold their percentage for the country as a whole but the real gain in strength has come from other large companies in no way connected with the Standard concerns.

These companies include such concerns as the Gulf, The Texas Company and Sinclair, which have been engaged in the marketing end of the oil business for years. They have greatly expanded their marketing facilities recently so they are practically independent of the jobber so far as the marketing of gasoline is concerned. However, it is not only these few major companies outside the Standard group which have made inroads in the field of the independent jobber, but also numerous smaller concerns which during the past few years have found that their best interests demanded the operation of bulk and service stations which would enable them to dispose of a part at least of their refinery output direct to the consumers.

A study of the detailed reports of the nine States given in the table shows that many of these companies which now rank among the first 20 to 40 concerns in the direct distribution of gasoline, were a few years ago unknown in the marketing end of the industry. Included in this number are such companies as the White Eagle Oil & Refining Company, Mexican Petroleum Corporation, Roxana Petroleum Corporation, Skelly Oil Company, Waite Phillips Company and for the entire United States approximately 100 other concerns. All these companies have refineries and in a majority of cases either directly or through allied or subsidiary concerns they also have crude sufficient to supply a part at least of their requirements.

(Continued on Page 128)

Significance of the Large Oil Fields

Since Beginning of Petroleum Industry 40 Fields in United States Have Produced More Than Half of Output of Crude

By Charles E. Bowles

From the Drake well in 1859 to the end of the year 1923, the United States had produced slightly more than 7,000,000,000 barrels of crude oil.

And of this vast amount 40 big fields produced 3,800,000,000 barrels, or a little more than 50 per cent.

Everybody inside the industry, and practically everybody outside of it, has heard so much about the overproduction of crude oil—especially during the last few years—that we lose sight of the fact that 40 years ago there was an overproduction that, taking relative conditions into consideration, was more serious than the flood from either Mexico or California.

Active drilling in the old Bradford (Pennsylvania) Field began in 1877 and by the summer of 1878 the field was in a frenzy of intensive development. The peak of production was reached in the midsummer of 1881 with average pipe line runs of 81,000 barrels a day during August, and with a number of single days running close to 100,000 barrels.

Bradford's Production

The yearly output of the Bradford Field during the period of its largest production was:

Years	Barrels
1876	383,000
1877	1,468,000
1878	6,198,000
1879	14,084,000
1880	20,138,000
1881	25,846,000
1882	18,626,000
1883	13,436,000
1884	12,096,000
1885	10,688,000
10 years	122,963,000

In 1879 this one field produced 70 per cent of all the oil produced in the United States, and 60 per cent of all the oil produced in the world.

During the 4-year period, 1879-1882, inclusive, this one field produced 75 per cent of all the oil produced in the United States, and 65 per cent of all the oil produced in the world.

The Bradford Field was passing its peak 20 years before the automobile appeared on the scene, and just about the time when our great industrial expansion was getting well under way. There were 103,000 miles of railroad in the United States in 1881 and the demand for lubricating oil was growing rapidly.

Our thoughts had not yet turned to fuel oil—the internal combustion engines was not yet developed, electric lighting was just beginning to be used, and there was a large demand for kerosene, both at home and abroad.

The Bradford Field had produced 190,000,000 barrels of oil before the birth of the automobile industry in 1900.

Spindle Top and Sour Lake

In January, 1901, Spindle Top tore loose and in 1902 the field produced over 17,000,000 barrels of oil. The Sour Lake Field came in in 1903 with almost 9,000,000 barrels for the year. Batson followed in 1904 with over 10,000,000 barrels and Humble in 1905 with over 18,000,000.

The Gulf Coast of Texas was easily the greatest cause of the industry's troubles just at the time that the automobile industry was getting started. In the four years from 1902 to 1905, inclusive, these four Texas fields alone produced over 81,000,000 barrels of oil—and the only thing that saved the situation was the fact that the oil was low gravity. These early Gulf Coast fields paved the way for the idea of using fuel oil.

The Kern River (California) Field was opened up in 1900 and in 1903 produced over 18,000,000 barrels of oil, of low gravity and containing little gasoline. In the 10 years from 1903 to 1912, inclusive, the Kern River Field produced a total of over 143,000,000 barrels of oil. In 1912 there were 112,000 automobiles in California, Oregon and Washington, hence the demand for gasoline was small. The early California production of heavy oil was especially acceptable to the industries of the Pacific Coast on account of the almost total absence of coal deposits in that entire area.

Glenn Pool Discovery

Robert Galbraith and Frank Chesley completed the discovery well in the Glenn Pool Field November 22, 1905, with 85 barrels production. The second well, completed a month later, started off at 700 barrels, the third well at 2,000—and the rush to the new field was on. Glenn Pool reached its peak with a production of 2,441,000 barrels for the month of August, 1907. In its 18 years the field has produced a total of approximately 170,000,000 barrels of oil.

When Glenn Pool was passing its peak in 1907 there were 142,000 automobiles registered in the entire United States and as this was the first big high gravity oil field in the Mid-Continent it is easy to see its effect on the crude oil situation. Pipe lines were inadequate, steel tanks could not be built fast enough, earthen storage was resorted to—but production ran away with the producers, the market collapsed, and for months "distress" oil sold for a few cents a barrel.

Cushing, the Mid-Continent's second great high-gravity oil field, was discovered in March, 1912, and the first gusher from a deeper sand was completed in December, 1913. The field was feverishly drilled during 1914, and is credited with having produced over 47,000,000 barrels during the year. In April, 1915, the field reached its peak with approximately 300,000 barrels a day—a record that has been surpassed by only two other fields, Santa Fe Springs and Powell, both in 1923. In 1916 Cushing produced over 70,000,000 barrels, and in the eleven years since its discovery approximately 280,000,000 barrels.

The area east of Bristow has been intensively developed during the last three years, and if we add this and the scattered production in Creek County to Glenn Pool's 170,000,000 barrels and Cushing's 280,000,000 barrels, it is probable that Creek County, Oklahoma, has produced in the neighborhood of 500,000,000 barrels of oil—an amount which places it easily in the lead as the greatest light oil field in the world.

The lower gravity Healdton Field was opened up in 1913 and many of the early wells came in at 4,000 and 5,000 barrels a day. The field passed its peak in 1917 with a total production for the year of over 22,000,000 barrels. In 11 years Healdton has produced probably 125,000,000 barrels of oil.

Kansas in Limelight

Glenn Pool was 10 years old and Cushing had just passed its peak when the Eldorado, Towanda and Augusta fields in Butler County, Kansas, were discovered in 1916 and 1917. In a little more than three years from the date of their discovery these fields had produced 100,000,000 barrels of oil, the total to the end of 1923 being approximately 165,000,000 barrels from the county. During its life one well on the Shumway farm, probably the best known of Butler County's gushers, produced 2,250,000 barrels of oil.

Coalinga's Production

The bringing in of big fields again shifts to California, whose first great field, Kern River, had produced 160,000,000 barrels of oil before Cushing was discovered. The second cycle of California oil development started with Coalinga, in the San Joaquin Valley, and this field had produced 8,000,000 barrels of oil before Glenn Pool was discovered. The five years from 1909 to 1913, inclusive, mark the period of Coalinga's most intensive development, the total production for that period being over 91,000,000 barrels. To the end of 1923 the field had produced a total of 272,000,000 barrels.

In its five best years, 1915-18, the great Midway Field produced 165,000,000 barrels of oil, and 377,000,000 barrels during the 24 years since it was discovered. The Midway and Sunset fields are usually referred to as one field, their combined production being over 475,000,000 barrels. In 1921-22 the Elk Hills Field, in the San Joaquin Valley, produced about 30,000,000 barrels. The few years of large production from these fields have been followed, in nearly every instance, by many years of very substantial production, the average decline being very slow. McKittrick's 67,000,000 barrels were produced with great regularity and no outstanding peaks. Lost Hills furnished 50,000,000 barrels by similar development.

The first cycle in Mid-Continent development, from 1901 to 1905, was marked by Spindle Top, Sour Lake, Batson, Saratoga and Humble, all with low gravity oil. Then in 1906 Glenn Pool came in with high gravity oil, followed by Cushing and Butler County, Kansas—also high gravity oil. Immediately following these fields there was an enormous development in Wichita, Eastland and Stephens counties, Texas—all high gravity fields.

Burkburnett Field

The peak of the Burkburnett Field came in December, 1919, with about 100,000 barrels a day, and 2,858,000 barrels for the month. Combining Burkburnett's production with the Electra Field, proctically all of which is in Wichita County, gives a total production of about 182,000,000 barrels. These fields were closely followed by Ranger and other in Eastland County the total production from which amounts to about 50,000,000 barrels.

The Breckenridge Field, in Stephens County, came in the next year after Ranger, and the total production of the county to date is over 91,000,000 barrels. From 1918 to 1922, while the light oil fields of Wichita, Eastland and Stephens counties were pouring out a flood of crude oil, the Hull and West Columbia fields, on the Gulf Coast, were being developed. These two fields produced a total of 80,000,000 barrels of heavy oil, in contrast to 323,000,000 barrels of light oil from Wichita, Eastland and Stephens counties.

Thus the early, or Gulf Coast development of Texas produced heavy oil fields only, while the later development produced a great deal more light oil than heavy oil.

The production from the San Joaquin Valley, California, especially during the earlier years, has been very largely low gravity oil, of fuel oil grade, and, in a general way, this is also true of the Los Angeles Basin fields up to about the year 1920.

Los Angeles Basin

The second cycle of San Joaquin Valley development, that brought in Coalinga, McKittrick, Midway-Sunset and Lost Hills took place about the same time as the first large-scale development in the Los Angeles Basin, the results from which were four big fields.

The Salt Lake Field, which lies largely within the city of Los Angeles, has produced a total of 58,000,000 barrels of oil. Coyote has produced 87,000,000 barrels, Montebello about 51,000,000 and Fullerton, 101,000,000—a total of 297,000,000 barrels from the four fields. Ventura-Newhall, California's pioneer oil producing area, is made up of a number of small fields, and is, therefore, not a big field either in point of production or as a unit producing area.

The Santa Maria Field, approximately 200 miles northwest of the Los Angeles Basin fields, and located near the ocean, has been a substantial but not a prolific producer, its output during its 22 years being 122,000,000 barrels.

The Elk Hills Field in the San Joaquin Valley has been developed since 1920 and has produced a total of 45,000,000 barrels of heavy oil, most of which is of a somewhat higher gravity than the average for the valley fields.

The period since the close of the World War can

(Continued on Page 132)

Little Change in Oklahoma Market

U. S. Motor Gasoline Prices Slightly Lower but Other Grades Firm. Lower Prices Coming From Larger Companies. Future Trend Depends on Crude

By C. O. Willson

In so far as prices are concerned, there was little change in the Group 3 (Oklahoma) refined market during the past week. There was no more activity in the open market than has existed for several week, but at the same time there was considerable resistance to the efforts of buyers to lower prices, largely a development of recent reductions in crude prices.

As to gasoline prices generally, they are unchanged with the exception of U. S. Motor (New Navy), the most important grade, which is fractionally lower than a week ago. Considering the pressure that has been brought for lower prices through buyers aided by a few sellers, the product and all other grades of gasoline have held up remarkably well with the outlook over the remainder of the month, due to that fact, more encouraging than it was a week ago.

In regard to U. S. Motor, the trade the past week has witnessed an unusual situation. The principal price concessions has come from the major refining interests rather than the smaller concerns. Ever since the gasoline market began to break in the Mid-Continent Field last February, the declines have for the most part been led by smaller concerns which for various reasons were anxious to keep their current production moving to the consuming markets as rapidly as possible. This was not always the case although the rule so far as Group 3 and other sections of the Mid-Continent were concerned. During this period several of the larger concerns were content to accumulate stocks and follow rather than lead in the lower price trend with a few staying out of the spot market entirely.

Change in Policy

This was especially true of Cosden & Co., the largest refiner in the group and the entire Mid-Continent Field. This concern was practically out of the spot market until about a month ago, confining its gasoline sales to marginal contract movement and a few scattered export sales. The company unquestionably during this period has had the largest gasoline stocks in the field, although at no time has it run near capacity.

Due possibly to recent changes in management, the company apparently has decided to reduce its gasoline inventories through the open market. The company has been bidding on some of the large orders placed by jobbers of the Middle West and points farther east and despite some strong competition, both within and outside the Mid-Continent Field, have obtained some important business. The prices at which these orders have been obtained are generally known and have had a depressing effect on the market generally, although not so much as might be expected. The company for several days has been quoting 7¾ cents on what is termed New Navy grade and 7½ cents on 56-58, 450. Prices for resale are ¼-cent under these prices.

Under the Market

These prices are slightly under the general market at this time. In Group 3 not more than one or two refiners are quoting U. S. Motor (New Navy) for resale at 7½ cents for immediate shipment, although it is more freely available at that figure for shipment over the month. Two large resale buyers on Monday stated the best price they could get on regular U. S. Motor was 7⅝ cents for immediate shipment. Other refiners are accustomed to point out that Cosden's New Navy does not quite measure up to Government specifications. However, the product is uniform and widely known in the Standard of Indiana territory where it is generally accepted by the trade as U. S. Motor grade.

The trade in Group 3, realizing the importance of Cosden & Co. continuance in the open market are wondering as to the company's action over he remainder of the summer and fall months. It is believed the company will be in the open market for some time, in line with a policy to reduce gasoline inventories before the winter months.

Reduced Runs

The company has reduced its runs at its West Tulsa refinery from 25,000 to approximately 16,000 barrels of crude daily. It is understood the company has released some of its crude connections so that its pipe line runs are now practically confined to its own production. Its lower crude runs to stills assures that gasoline stocks are being rapidly reduced.

This company was not the only major refiner which has been active in the spot market during the past week at prices slightly under the general market established by the smaller concerns. The latter, as was explained in these columns last week, have in many instances reduced their stocks so they do not have any of the so-called "distress" material on hand. Some of these concerns are still making deliveries on their July business and state they are in excellent shape for all of August. These concerns are undoubtedly in a position which would mean firm prices at least if it were not for the competitive situation previously explained.

Crude Reductions

Although there is no unanimity of opinion in predictions as to the future, many again are of the opinion that U. S. Motor gasoline will strike bottom at 7½ cents, providing there are no further crude reductions. The latter belongs to the field of speculation. It is too early yet for the recent reductions in crude prices to be reflected in any marked slowing up in new field operations and lower production. Many do not believe the Prairie Oil & Gas Co. will reduce crude prices again this month unless action is forced as it was by the Magnolia Petroleum Co. at the last reduction. So far as Oklahoma is concerned, there is still very little, if any, bootleg crude available under the posted price to independent refiners and this is also an important factor in gauging the crude price trend. The reduction in Pennsylvania crudes is not necessarily significant when it is recalled that four reductions were made in Pennsylvania crudes before any general reductions were announced in the Mid-Continent Fields. Offsetting these views is the fact that actual price changes so far this year have generally come at times when least expected by those who keep in touch with crude markets. It is a development of a confusing situation in which there is little uniformity of opinion among major oil interests as to the immediate needs of the industry covering market structures.

Gasolines and Naphtha

The situation in regard to U. S. Motor gasoline has been outlined. The situation in regard to both higher and lower gravities is largely the same. Naphthas are weak and blenders state they have had more material offered than usual. The 50-52, 450 grade has sold as low as 7 cents, although many plants are asking 7½ cents. More plants are asking 9 cents for 60-62, 400 and are moving their usual quantities at that price. However, it has been sold under that figure, both for immediate shipment and delivery over the month. Prices on 64-66, aviation vary from 9¼ to 9¾ cents with probably the bulk of the movement at 9½ cents direct to the trade.

Inquiry among representative refiners and marketers will usually bring the response that the market is "dull." It is generally agreed that there are few signs of life in the open market. It is possible that this is largely a psychological situation, "a development," as one market observer has expressed it, "of breaking down in morale evident for weeks."

This observer points to the Western Petroleum Refiners Association's weekly report that there is really a heavy movement of gasoline. In its latest report for the week ending July 26, the report shows a reduction in gasoline stocks of approximately 4,000,000 gallons in th Mid-Continent Field of which approximately 1,750,000 gallons was from the stocks of Group 3 refiners. Since May 31, Mid-Continent gasoline stocks have been reduced from 141,088,404 gallons to 123,780,358 gallons on July 26. It is probable that the reduction will be at a still greater rate in August, the heaviest gasoline consuming period of the year, according to the Bureau of Mines' reports. In Oklahoma the reductions will be added by the Cosden curtailment previously mentioned and some other reductions which are explained in The Oil and Gas Journal's monthly review of Mid-Continent refined market developments found elsewhere in this issue. According to this report, Oklahoma refiners were running 20,425 bbls. less to their stills on August 1 chan on July 1.

Kerosenes and Distillates

All grades of kerosene are firm. Some refiners reported a slowing up in their movement of 42-46, water white, direct to the trade, but this apparently was not general and prices were unchanged. At least two buyers were in the market seeking a considerable quantity for shipment over August. It is understood they were endeavoring to purchase 41-43 under 4 cents, but were unsuccessful One of these buyers stated that he only found one refiner with a large quantity and that concern is not selling except at direct to the trade prices. The Western Petroleum Refiners Association's reports shows that there are 13,194,969 gallons of kerosene in storage in Oklahoma, representing less than four weeks supply based on present shipment. It is believed that due to this situation, he price position of the product is secure for the balance of the month at least providing outside competition does no enter.

There is little new in the distillate market. Spot prices are firm and one buyer who made a survey of the field reported a dearth of material available for spot shipment of the better grades. Every mail brings refiners inquiries from jobbers in the Middle West seeking long time contracts for distillates. Refiners are rarely interested, stating that most of these inquiries come from jobbers who are not actually in the distilllate business at he present time. These jobbers are considering getting into the business providing they can line up a source of supply which will assure them a profit. Some contracts are being made but, as was pointed out in previous issues, due to the generally unsettled situation, there is a disposition on the part of many refiners to trust to the open market to dispose of their output over the next six months.

Natural Gasolines and Blends

The absorption grades of natural gasolines are unchanged in price. The heavy buying the first of the month had aided these grades. At least one buyer who is also a manufacturer was in the market this week for a large shipment, but so far as known was not able to purchase.

The demand for Grade C has not been so strong and the price is off ¼-cent. Cosden & Co. has bought the grade at 7 and 7¼ cents delivered at the plant. Other sales have been made at 6½ cents at the plants. The manufacturers are confident there will be little if any further

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REFINED MARKET BAROMETER

There was little improvement in refined markets throughout the United States during the past week. Prices are steady along the West Coast but reports from other sections generally show lower prices prevailing, where there are any changes. Tank wagon markets were generally firm but additional crude reductions add to the uncertainty reflected in the unsettled refined markets. The gasoline market is weak except the West Coast and average prices are lower although there is strong opposition to a declining market in some areas. There were no general changes in kerosene and distillate markets. A better tone prevails for fuel oils which would probably bring firm or advancing markets if it were not for the weakness in the crude situation. Lubricating oil prices are firmer than last week. Natural gasolines are generally firm.

Mid-Continent—Gasolines are generally lower in price although markets in Arkansas and North Louisiana have shown little change. Larger companies important factor in spot gasoline business. Kerosene and distillates strong with no important changes in price. Practically no change in fuel and gas oil market. An improvement in buying has aided both fuel and gas oils whenever prices are lowered in any area and this has prevented a general decline. Natural gasolines generally firm. Lubricating oil prices unchanged.

Atlantic Seaboard—Recent crude reductions have brought weaker tone in gasoline market and prices have been lowered including both domestic and export trade. Fair movement of gasoline for export. Kerosene dull. No change in fuel and gas oils with a slight shading of prices. Stocks low. Lubricating oil soft.

Pennsylvania—Only scattered changes in prices. Movement of gasoline good with keen competition for all business. Kerosene prices firm. Wax prices slightly higher.

California—Satisfactory week for sellers with practically no changes in prices. Competition with Atlantic Seaboard may force slightly lower prices for export gasolines. Fuel oil prices still steady but with record stocks on hand buyers are not so active as formerly.

Gulf Coast—Little change in prices since reductions were made following recent downward revision of crude price schedules. Some improvement in demand since lower prices became effective.

Chicago—Market fairly active and prices firmer than trade anticipated following recent reductions. Gasoline prices firm for several days. Less demand for kerosenes but no general change in price. Fuel oils moving in small lots. Lubricating oils slow.

Oklahoma Refinery Crude Runs Less

Monthly Review Shows That Oklahoma Plants Have Reduced 20,425 Barrels Since July 1. Other Areas Except North Central Texas Increase.

By C. O. Willson

Although Oklahoma refiners on August 1 were running 20,425 bbls. less crude to their stills than on July 1, increased operations on the part of Kansas, Arkansas and North Louisiana plants partially offset this decline so the total decline for the Mid-Continent area was only 11,350 bbls. daily, or approximately 3½ per cent. The largest increase was in Kansas where the total runs were 4,750 bbls. greater than on July 1. North Louisiana plants had a 2,500-bbl. increase and Arkansas plants 2,175 bbls. North Central Texas operations are practically the same as last month.

Despite the lower crude runs, as shown in Table No. 3, all refining areas in the Mid-Continent are running more crude to stills than a year ago. The total increase in 64,060 bbls. daily, the greater part of which comes from North Central Texas and Kansas refineries, largely from new plants.

The reduced runs indicates lower crude prices have not reached the point yet where they would tend to increase further operating activity on the part of Mid-Continent refineries. The monthly survey showed that four small plants which were shut down has started up but this was offset by shutdowns.

Oklahoma

Several changes in operations occurred in Oklahoma. The most important change was that of Cosden & Co. which reduced its runs the latter part of July so that on August 1 its West Tulsa plant was handling 16,000 bbls. daily. On July 1, its runs were 25,000 bbls. daily. The Pierce Oil Corp. has reduced its runs so that on the first of the month it was confining its operations to re-run. It is understood the company contemplates keeping its operations at its Sand Springs plant confined to re-run or a complete shutdown until market conditions improve. It has released some of its crude connections but is still running some oil into storage. The plant was running 7,800 bbls. daily the first of July. Its change in operations occurred the latter part of July.

The Ardmore plant of the Pure Oil Co. was also only handling re-run the first of August. This action is temporary, however, as the company will start running crude again soon. The company has reduced its runs of 4,800 bbls. adily on July 1, at its Cushing plant, to 4,000 bbls. daily on August 1. The Champlin Refining Co. is another one of the major refiners of the State which has reduced its runs. It is now running around 6.000 bbls. daily against 8,000 bbls. on July 1.

The Empire Refineries, Inc., and Marland Refining Co., the remaining two large refiners of the State, have not changed their operations. The Pauline Refining Co.'s plant at Hampton is shut down, having been sold to the W. M. Priddy and a group of Wichita Falls operators who will move the plant to Panhandle, Texas. These operators have some production in that new section and also recently completed a pipe line from the field to Panhandle. It is expected the new plant will be in operation this fall.

North Central Texas

There were fewer changes in the North Central Texas refinery operations than in any other area. It will be noted from the table that the total runs to stills is practically the same as last month. In the Wichita Falls area the American Refining Co. has increased its runs slightly as have four or five other plants. The Tidal Western Refining Co. has reduced the runs of its Burkburnett plant from nearly 2,000 bbls. on July 1 to 1,000 bbls. on August 1. The small plant of the Tiger Refining Co. was the only shutdown and its action is temporary.

Kansas

Several plants in Kansas have increased their runs. The Derby Oil & Refining Co. has increased its runs from 2,100 bbls. on July 1 to 4,500 bbls. on August 1. The Kanotex Refining Co. at Arkansas Cit yis running 4,800 bbls. daily, an increase of 1,600 bbls. daily over July 1. The Moore Refining Co. has almost doubled its runs and the Roxana Petroleum Co. at Arkansas City has also increased its runs. Skelly Oil Co. at El Dorado is still another of the larger refiners which has increased its operations. These increases were partially offset by a decrease of 4,000 bbls. daily in the runs of the Standard of Kansas plant, Neodesha.

Arkansas

There were several changes in the operations of the Arkansas plants, although the total number of plants operating is the same as last month. The plants of the Four States Oil Co. of Texarkana and the Pine Bluff Refining Co., Pine Bluff, are operating again after shut downs. The plant of the Continental Oil & Gas Co. has also been added to the list of operating refineries. The operations of the three major plants of the State—Lion Oil & Refining Co., Kettle Creek Refining Co. and Root Refineries, all located at El Dorado, are practically the same as last month. The plant of the Hot Springs Refining Co. at Hot Springs is temporarily shut down as is the plant of the Grison Refining Co. at El Dorado, which was handling re-run last month. The plant of the Ouachita Valley Refining Co. at El Dorado, is shut down. This plant has been operated with the Union Pipe Line Co. plant under lease. The crude was run at the Ouachita plant and re-run handled at the Union plant which has a cracking installation. Both the crude runs and re-run will be handled at the Union plant in the future.

The 2,500-bbl. increase in north Louisiana runs is due to two plants. The Louisiana Oil Refining Corp. at Shreveport has increased its runs from 8,000 to 10,000 bbls. daily and the smaller plant of the Caddo Central Oil & Refining Corp. is running 500 bbls. more than it was the first of July. Other plant operations are unchanged.

TABLE NO. 1

Based on plants which have been in operation during the past year.

	No. of Plants	Capacities	Plants Op. Aug. 1. '24	Dy. Runs Aug. 1. '24
Oklahoma	67	271,400	49	132,300
North Central Texas	47	165,750	36	83,700
*Kansas	32	131,200	20	73,550
North Louisiana	7	33,500	6	27,300
Arkansas	16	42,250	8	16,150
Totals	169	644,100	119	332,900

*Includes three Missouri plants.

TABLE NO. 2

Based on operations of all plants as of August 1, 1924, and July 1, 1924. (Capacities includes all plants regardless of how long they have been shut down).

	No. of Plants	Capacities	Plants Op. Aug. 1. '24	Dy. Runs July 1. '24	Plants Op. July 1. '24	Dy Runs July 1. '24	Decrease Aug. 1. '24
Oklahoma	103	354,100	49	132,200	50	152,625	20,425
N. Central Texas.	73	237,350	36	83,700	36	84,050	350
†Kansas	39	138,100	20	73,550	20	68,800	*4,750
N. Louisiana	17	35,000	6	27,300	6	24,800	*2,500
Arkansas	16	41,700	8	16,150	8	13,975	*2,175
Total	248	816,330	119	332,900	120	244,250	11,350

*Increase. †Includes four Missouri plants.

TABLE NO. 3

Based on operations of all plants as of June 1, 1924, and June 1, 1923.

	No. Plants Aug. 1. '23	Capacity	Plants Op. Aug. 1, '24	Daily Runs Aug. 1. '24	Daily Dec. Comp'd to Aug. 1. '24
Oklahoma	102	359,700	54	125,915	6,385
North Central Texas	60	196,450	32	54,700	29,000
*Kansas	41	110,400	25	61,640	11,910
North Louisiana	20	45,550	9	16 450	16,850
Arkansas	17	27,010	6	16,135	15
Total	240	739 310	126	268,840	64,060

*Includes four Missouri plants.

REFINING OPERATIONS IN OKLAHOMA

(Plants which have been in operation during the past year.)

Name and Location—	Daily Capacity	Runs August 1	Runs July 1
Allied Refining Co., Okmulgee	1,800	1,000	750
Anderson-Prichard, Cyril	1,200	750	700
Barnsdall Refining Co., Barnsdall	3,500	4,000	3 800
Bolene Refining Co., Enid	5,000	4,000	4,000
Cameron Refining Co., Ardmore	3,000	2,800	2,600
Canfield Refining Co., Yale	500	100	50
Champlin Refining Co., Enid	16,000	6.200	8,000
Chestnut & Smith Corp., Sand Springs	5,000	Shut down	Shut down
Coleman-Nelson Corp., West Tulsa	2,000	250	250
Cosden & Co., West Tulsa	35,000	16,000	25,000
Cushing Refining & Gasoline Co., Cushing	2,000	500	600
Cushing Refining & Gasoline Co., Blackwell	1,000	600	700
Daisy Bell Petroleum Co., Wilson	2,000	50	125
Empire Refineries, Inc., Cushing	7,000	5,250	5,750
Empire Refineries, Inc., Okmulgee	2,500	2,500	2,500
Empire Refineries, Inc., Ponca City	6,000	5,500	5,500
Fairmont Refining Co., Fairmont	2,500	Shut down	Shut down
Garber Refining Co. (Omar)	3,000	1,500	1,400
Gilmer Oil Co., Ringling	800	Shut down	Shut down
Glen Braden Refining Co., Perry	1,000	Shut down	Shut down
Globe Oil & Ref. Co., Blackwell	5,000	2,500	2,500
Hewitt Refining Co., Hewitt	1,800	750	700
Illinois Oil Co., Cushing	2,500	1,600	1,900
Imperial Refining Co., Ardmore	6,000	4,200	3,750
Indiahoma Refining Co., Okmulgee	9,000	Shut down	Shut down
Inland Refining Co., Cushing	3,000	Shut down	Shut down
Johnson Oil Refining Co., Cleveland	4,000	3,200	2,200
Lorraine Refining Co., Bristow	4,000	2,000	2,000
Marland Refining Co., Ponca City	15,000	10,500	10,500
Maud Oil & Ref. Co., Maud	400	Shut down	Shut down
Nyanza Refining Co., Wilson	3,500	750	900
Oil State Refining Co., Enid	2,000	700	800
Oil State Refining Co., Allen	600	Shut down	Shut down
Oklahoma Prod. & Ref. Corp., Muskogee	2,500	1,800	1,200
Okla.-Tex. Ref. So. (Sagamore), Grandfield	2,000	2,400	2,300
Pauline Refining Co., Hampton	1,200	Shut down	700
Phillips Co. (Waite), Okmulgee	6,000	4,000	4,000
Peppers Gasoline Co., Covington	1,000	400	400
Pierce Oil Corp., Sand Springs	10,000	Rerun	7,800
Producers & Refiners Corp., West Tulsa	7,000	4,500	4,500
Producers & Refiners Corp., Blackwell	3,000	1,000	1,000
Producers & Refiners Corp. (Polar) Sapulpa	2,000	Shut down	Shut down
Pure Oil Co., Ardmore	6,500	Rerun	2,000
Pure Oil Co., Cushing	5,000	4,000	4,800
Riley Petroleum Co., Bristow	800	300	400
Rock Island Ref. & Pipe Line Co., Duncan	2,000	1,400	1,300
Roland Oil Co., Bristow	1,500	900	1,000
Sapulpa Refining Co., Sapulpa	7,000	3,200	3,000
Shaffer Oil & Ref. Co., Cushing	6,000	5,800	5,800
Southwestern Oil Corp., Enid	1,500	Shut down	Shut down
Superior Oil Corp., Grandfield	3,000	Shut down	Shut down
Sun Co., Yale	3,000	2,000	2,000
Sinclair Refining Co., Cushing	6,000	Shut down	Shut down
Sinclair Refining Co., Muskogee	1,000	650	800
The Texas Co., West Tulsa	9,000	9,000	8,250
Texas Pacific Coal & Oil Co., Wynnewood	2,500	1,200	1,500
Tidal Refining Co., Drumright	6,000	3,750	4,000
Transcontinental Oil Co., Boynton	2,500	2,000	2,000
Transcontinental Oil Co., Bristow	5,000	4,500	5,000
Tonkawa Petroleum Co., Tonkawa	2,500	Shut down	Shut down
Turley Refining Co. (formerly Home Petroleum Co.), Oklahoma City	2,500	Shut down	Shut down
Union Oil & Ref. Co., Grandfield	2,000	Shut down	Shut down
Wagoner Refining Co., Wagoner	300	Shut down	Shut down
Westheimer & Daube (Bay State), Healdton	1,000	Shut down	Shut down
Whaleback Production Co., Oklahoma City	1,500	400	200
Western Oil Corp., Beckett	1,500	900	900
Yale Oil Corp., Yale	1,500	900	800
Total	354,100	132,200	152,625

REFINING OPERATIONS IN KANSAS

(Plants which have been in operation during the past year.)

Name and Location—	Daily Capacity	Runs August 1	Runs July 1
Commonwealth Oil & Ref. Co., Moran	1,800	350	500
Derby Oil & Ref. Co., Wichita	4,000	4,500	2,100
El Dorado Refining Co., El Dorado	3,500	2,000	2,000
Frontier Refining Co., Hutchinson	2,500	Shut down	Shut down
Grant Oil Co., Augusta	500	400	400
Golden Rule Refining Co., Wichita	1,000	500	550
Gordon Refining Co., Florence	2,000	Shut down	Shut down
Industrial Refining Co., El Dorado	1,500	Shut down	Shut down
Kansas-Texas Petroleum Co., Wichita	1,500	Shut down	Shut down
Kanotex Refining Co., Arkansas City	4,800	4,800	3,200
Kansas Oil Refining Co., Coffeyville	1,500	350	500
Kansas City Refining Co., Kansas City	4,000	3,600	3,600
Mutual Refining Co., Chanute	1,000	Shut down	Shut down
Moore Refining Co., Arkansas City	4,000	5,000	2,900
Miller Petroleum Co., Humboldt	2,000	Shut down	Shut down
Mo-Kan Refining Co., Kansas City	700	Shut down	Shut down
National Refining Co., Coffeyville	10,000	4,900	4,900
Peerless Oil Refining Co., Chanute	3,500	1,500	1,600
Red Bird Refining Co., Fredonia	300	100	100
Richardson Refining Co., El Dorado	1,500	Shut down	Shut down
Roxana Petroleum Corp., Arkansas City	15,000	11,000	9,300
Sinclair Refining Co., Coffeyville	6,500	4,500	4,600
Sinclair Refining Co., Argentine	3,000	4,000	4,300
Skelly Oil Co., El Dorado	14,000	10,000	8,000
Sterling Oil & Ref. Co., Wichita	5,000	Shut down	Shut down
Standard Oil Co. of Kansas, Neodesha	12,000	8,000	12,000
Tri-State Oil & Ref. Corp., El Dorado	1,200	Shut down	Shut down
Vickers Petroleum Co., Potwin	1 800	1,800	1,600

(Continued on Page 124)

American Rights in Rumania Menaced

Text of New Oil Law Shows It Amounts to Confiscation. State Department Interested Also in Open Door Principle

By L. M. Fanning

Rumanian Confiscatory Legislation

With a confiscatory mining law passed by the Senate and the Lower House and awaiting the signature of King Ferdinand, the threat to American oil interests in Rumania is engaging the attention of the American State Department. Peter Augustus Jay, United States Minister at Bucharest, has been summoned from Bucharest to Washington to confer with the department and to furnish it with first-hand information on the complicated state of affairs in the Balkan country. Advices from Washington are that, while the State Deartment has been closely following developments, nothing can be said as to what steps might be taken by this Government to safeguard American interests until a more thorough investigation had been completed. It is understood the American Government is not alone in taking a serious view of the latest development in Rumania as exemplified in the new mining legislation. Practically all foreign governments whose nationals have interested in Rumania are understood to have assumed a somewhat similar attitude, if not to have actually protested. British, French and Belgian capital is heavily interested in Rumania. The principal American interest is the Standard Oil Company (New Jersey), whose investment in Rumania is variously estimated from $10,000,000 to $30,000,000.

* * * * *

American Interest In Open Door

The interest of the State Department is in connection with alleged confiscatory features of the new mining law and with the question whether the provisions of the law are contrary to the general policy of freedom of opportunity. Involved in the passage of the mining law in Rumania is a long story of complex social, economic and political tendencies which have kept the country in more or less a state of disturbance and uncertainty since long before the war. Rumania has experimented with scores of policies involving its oil industry. Following the war the Government took over the sub-soil rights and also stipulated that for lands not at that time leased, companies could not take out leases. Many existing leases had not been filed and owners of these leases were not permitted to register them. For the last three years there has been practically no protection for leases.

* * * * *

Virtual Nationalization and Confiscation

The new mining law which, unless the proponents of the measure decide to recede from their position in view of the serious consequencies which might follow promulgation of the act, will be signed by King Ferdinand, provides a form of nationalization of companies, State monopolization of pipe lines and of ultimate monopolization of the internal marketing of petroleum products. The mining act is a long document containing 269 articles . It covers metaliferous ores as well as mineral fuels. According to its general provisions, all strata of mineral substances from which metals, metalloids or combinations of these substances may be extracted, as well as strata of mineral fuels, bitumens, mineral waters in general and natural gases of all kinds and all the riches of the subsoil of whatever nature are and remain the State's property in all their development from the surface to no matter what depth. The right to exploit the mineral substances belonging to the State is exercised by the State, either directly or by transfer of this right to private initiative, according to the regulations and conditions of the present law; concessions are granted only in regions previously declared cedable mining property on the basis of the prospecting pursued by exploration work from which the undoubted existence of an exploitable stratum has been proved. The law provides the granting of prospecting permits and of exclusive permits for exploring. A zone is declared cedable mining property only if upon its exploration through the exclusive permit, or through nearby exploitations, it shall be proved that strata exist which may be exploited. This region immediately becomes concessionable mining property and the Ministry of Industry and Commerce will proceed to the division of the region into leasable perimeters in three groups. The institution of exploitation concessions is subject to fixed regulations which involve some of the principal features of the law which, it is believed, would amount to confiscation of foreign property interests.

* * * * *

Foreign Companies Under New Law

The law provides that a concession is granted only to enterprises constituted as Rumanian mining joint stock companies according to the provisions of the commercial code and which at the same time fulfill the provisions of the present law. This stipulation as well as the provision on the formation of Rumanian mining companies, amounts to a kind of nationalization. Companies with foreign capital keep the concessions which they have acquired up to the date of the Constitution (March 29, 1923) if the concessions have been consolidated or are being consolidated. Unconsolidated concessions or those acquired after January, 1922, under the decree which makes all concessions subject to the authorization of the ministry, must be presented for validation. According to the latest news of the bill as passed and finally modified, this validation may be put into effect, it being stated that the land owner may dispose of his lands in communes where exploitation exists for a period of 30 years from the date of the Constitution. Concessions in communes where there is no exploitation, may also be validated with the obligation that within 10 years from the promulgation of the law the concessionee shall begin exploitation, and on this basis only will the commission validate the cocession.

* * * * *

Rumania Leases Where Exploitation Exists

Concessions deposited at the ministry from January, 1922, until the present time, as well as those in communes where no exploitation exists, must in order to be validated, pay the State a royalty of 4 per cent. It is gatehered from the law that companies with foreign capital have the right, in communes where exploitation exists, still to acquire lands from the proprietors. However, in these communes almost everything has already been leased and the only advantage would be in prolonging concessions already existing and which expire shortly. These are prolonged until 1940-1950. All that belongs to the State in communes in which exploitation exists, such as Telega, Moreni, Baicoi, Scorteni, Bordeni, Tintea and Pacureti, namely the State land in these communes and which the State possessed before the Constitution, may not, so far as concerns perimeters in group 1, be given except to Rumania mining companies which fulfill the requirements of the act as to stock ownership, management, operation, etc. However, perimeters of the second group may also be given ot foreign capital which takes the obligation to nationalize itself within 10 years nad which has two-thirds of its board comprised of Rumanian subjects.

* * * * *

Foreign Capital Limited Without Exploitation

In communes where there is no exploitation, companies with foreign capital may only have their old concessions which must be put into exploitation within 10 years from the date of the law. They must also get from the State exploration permits or exploitation concessions in the third group of regions explored by these companies by others, if the former have already explored a region with favorable results. A company with foreign capital may apply for an exploration permit, which the State may or may not grant, for a region of 100 to 400 hectares. If favorable results are obtained it has the right to retain 50 hectares for exploitation without the obligation ot transform itself in a Rumanian mining company. It also has the right to a perimeter of 30 to 50 hectares on the land explored by it, but this only on condition that it has two-thirds of its board of management Rumanian and if it transforms itself in 10 years into a Rumanian mining company. The exploring company, if it transforms itself into a Rumanian company within 10 years, has also the right to another perimeter in the third group formed around the land which it has explored, as well as a perimeter in the third group of an area explored by another company if it has also explored a region with favorable results.

* * * * *

Personnel, Management and Profits

Perimeters taken from the State by companies with foreign capital for exploration or exploitation must be worked under the conditions of the mining law. Lands which they possess on the basis of rights already acquired must also be worked in accordance with the mining police provisions contained in the mining law. The law provides that the personnel of all companies shall be in the proportion of 75 per cent Rumanians. An exception is made for the technical personnel in the sense that the personnel which is at present in the service will be allowed to continue, but in regard to the other classes of personnel the ministry has the right oy a simple decision or regulation to create categories of employes such as workmen, clerks, directors, etc., and in each of these categories it may now be required that 75 per cent Rumanian shall be obligatory in proportion. The law adds that in regard to the category of directors, the ministry may, within seven years from the promulgation of the law, tolerate a greater proportion of foreigners. The mechanism of the law whereby the State controls the petroleum industry goes so far as to enable it to substitute someone else for the chief director. Of the net profit of companies, after the deduction of 5 per cent for the shareholders and amounts for the reserve fund and depreciation, a minimum of 15 per cent of the net profit is to be given to maintain a fund for the clerks and workmen.

* * * * *

State Exploitation and Monopolization

The law provides the creation of reserve perimeters for the State which shall exploit them on the basis of the law of commercialization either by Regie or in the way of concessions in accordance with the law of commercialization of June 7, 1924. As regards provisions in connection with the recognition and legalization of acquired rights, the law makes subject to validation, rights of internal distribution such as those exercised by the Distributia, the present organization of all companies marketing products within the country. The law empowers the State to monopolize pipe lines from the refineries to the export stations. In regard to pipe lines from the oil fields to the storage stations the State reserves the right to expropriate them against compensation, when such lines serve several producers, but without, however, impeding the normal operation of the transport of the products of the expropriated undertaking. The provisions regarding the internal sale of petroleum products form the object of a monopoly, a company being created in accordance with the provisions of the commercialization law and on the basis of a special law.

* * * * *

On the termination of concessioned contracts,

(Continued on Page 121)

Double Leg Derricks—
how to make them

A PRACTICE which is gaining favor in many fields is to buy a light Moore derrick with a set of reinforcing legs which are used while drilling is going on. A set of special clamps are furnished with the derrick for this purpose. The strength of the derrick may easily be doubled by the use of these reinforcing legs.

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REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

CHICAGO DIST. (Based on Group 3)—	Aug. 5		July 29		July 22	
50-52 450 end point (Naphtha)	.07¼	.07¼	.07½	.07¾	.07¾	.08
56-58 450 end point	.07½	.07¾	.07¾	.08	.07¾	.08
58-60 437 end point (U. S. Motor)	.07¾	.08	.08	.08¼	.08	.08¼
60-62 400 end point	.09	.09¼	.09¼	.09½	.09¼	.09½
64-66 375 end point	.09½	.10	.10	.10¼	.10¼	.10½
68-70 360 end point	.10½	.11	.10¾	.11	.10¾	.11¼
OKLAHOMA (Group 3)—						
50-52 450 end point (Naphtha)	.07¼	.07½	.07¼	.07½	.07½	.07¾
56-58 450 end point	.07⅜	.07⅝	.07½	.07¾	.07¾	.08
58-60 437 end point (U. S. Motor)	.07⅝	.07⅞	.07¾	.08	.08	.08¼
60-62 400 end point	.08¾	.09	.08¾	.09	.09	.09½
64-66 375 end point	.09¼	.09½	.09¼	.09½	.09¾	.10
68-70 350-365 end point	.10¼	.10¾	.10½	.10¾	.10¾	.11
KANSAS—						
58-60 437 end point (U. S. Motor)	.07¾	.08¼	.08	.08¼	.08¼	.08¾
NORTH TEXAS—						
48-52 450 end point (Naphtha)	.07	.07¼	.07	.07¼	.07½	.07¾
50-52 440 end point (Naphtha)	.07	.07½	.07¼	.07½	.07½	.07¾
56-58 450 end point	.07¼	.07½	.07¼	.07½	.07½	.07¾
58-60 437 end point (U. S. Motor)	.07½	.07¾	.07¾	.08	.08	.08¼
60-62 400 end point	.08¾	.09	.08¾	.09	.09	.09¼
64-66 390 end point	.09	.09¼	.09	.09¼	.09½	.09¾
64-66 375 end point	.09¼	.09½	.09¼	.09½	.09¾	.10
68-70 360 end point	.10¼	.10½	.10¼	.10½	.10½	.10¾
NORTH LOUISIANA—						
56-58 450 end point	.07¾	.08	.07¾	.08	.08	.08½
58-60 437 end point (U. S. Motor)	.08	.08¼	.08	.08¼	.08¼	.08½
60-62 400 end point	.09¼	.09½	.09¼	.09½	.09¼	.10
64-66 390 end point	.09½	.10	.09¾	.10	.10	.10¼
64-66 375 end point	.10	.10¼	.10¼	.10½	.10½	.10¾
ARKANSAS—						
58-60 450 end point	.08	.08¼	.08	.08¼	.08¼	.08½
58-60 437 end point (U. S. Motor)	.08¼	.08½	.08¼	.08½	.08½	.08⅝
64-66 375 end point	.09½	.09¾	.09¾	.10	.10	.10¼
ROCKY MOUNTAIN STATES—						
*58-60 437 end point (U. S. Motor)	.10¼	.10½	.10¼	.10½	.10¾	.11¼
PENNSYLVANIA—						
52 Naphtha	.11½		.11½		.11½	
54 Naphtha	.11⅞		.11⅞		.11⅞	
56 Gasoline	.12		.12		.12	
58 Gasoline	.12¼		.12¼		.12¼	
60 Gasoline	.12¾		.12¾		.12¾	
62 Gasoline	.13½		.13½		.13½	
64 Gasoline	.14¼		.14¼		.14¼	
66 Gasoline	.15		.15		.15	
68-70 Gasoline	.16¼		.16¼		.16¼	
CALIFORNIA—						
54-60 437 end point (U. S. Motor)	.11	.12	.11	.12	.10½	.11½

*Colorado points.

NATURAL GASOLINE

CHICAGO DIST. (Based on Group 3)—	Aug. 5		July 29		July 22	
Grade A, 72-78, under 375 e.p., rec. 90%	.07¼	.07½	.07½	.07¾	.07¾	.08
Grade B, 76-82, 375 end point, rec. 85%	.07	.07¼	.07	.07¼	.07¼	.07½
Grade C, 80-88, 350 end point, rec. 78%	.06½	.07	.06¾	.07	.06¾	.07
OKLAHOMA (Group 3)—						
Grade A, 72-78, under 375 e.p., rec. 90%	.07¼	.07½	.07¼	.07½	.07¼	.07½
Grade B, 76-82, 375 end point, rec. 85%	.07	.07¼	.07	.07¼	.07	.07¼
Grade C, 80-88, 350 end point, rec. 78%	.06½	.06¾	.06¾	.07	.06½	.07
Grade D, 88-92, 350 end point	.06½	.06¾	.06½	.07	.06½	.07
NORTH TEXAS—						
Grade A, 72-78, under 375 e.p., rec. 90%	.07⅛	.07⅜	.07¼	.07½	.07¼	.07½
Grade B, 76-82, 375 end point, rec. 85%	.07	.07¼	.07	.07¼	.07	.07½
Grade C, 80-88, 350 end point, rec. 78%	.06½	.06¾	.06¾	.07	.06¾	.07
CALIFORNIA—						
68-80 38-410 end point absorption	.10½	.11	.10½	.11	.10	.11
78-84 350 end point compression	.10		.10		.10	

MOTOR NATURAL GASOLINE (BLEND)

CHICAGO DIST. (Based on Group 3)—	Aug. 5		July 29		July 22	
58-62 437 end point	.07¼	.07½	.07½	.07¾	.07¾	.08
60-62 450 end point	.07¼	.07½	.07½	.07¾	.07¾	.08
64-66 450 end point	.07¼	.07½	.07½	.07¾	.07¾	.08
OKLAHOMA (Group 3)—						
60-62 456 end point	.07½	.07½	.07¼	.07¾	.07½	.07¾
64-66 437 end point	.07¼	.07½	.07¼	.07¾	.07½	.07¾
68-70 430 435 end point	.07¼	.07½	.07¼	.07¾	.07¼	.07¾
NORTH TEXAS—						
58-62 440 end point	.07¼	.07½	.07¼	.07½	.07½	.07¾
58-60 450 end point	.07¼	.07½	.07¼	.07½	.07½	.07¾
PENNSYLVANIA—						
*60-62	.11½		.11½		.11½	
*64-66	.11½		.11½		.11½	
*66-68	.11½		.11½		.11½	
*68-70	.11½		.11½		.11½	

*At Sistersville, W. Va.

BURNING OIL

CHICAGO DIST. (Based on Group 3)—	Aug. 5		July 29		July 22	
42-43 water white Kerosene	.04	.04¼	.04	.04½	.04	.04¼
42-44 water white Kerosene	.04¼	.04½	.04½	.04½	.04¼	.04½
NORTH LOUISIANA—						
41-43 prime white Kerosene	.04¼	.04½	.04¼	.04½	.04¼	.04½
42-44 water white Kerosene	.04½	.04¾	.04½	.04¾	.04½	.04¾
KANSAS—						
41-43 water white Kerosene	.04¼	.04½	.04¼	.04½	.04¼	.04½
NORTH TEXAS—						
41-43 water white Kerosene	.04	.04⅛	.04	.04⅛	.03⅞	.04
41-43 prime white Kerosene	.03⅝	.03¾	.03⅝	.03¾	.03⅝	.03¾
40-42 prime white Kerosene	.03⅝	.03¾	.03⅝	.03¾	.03⅝	.03¾
42-44 prime white Kerosene	.04¼	.04¼	.04⅛	.04¼	.04⅛	.04⅜
OKLAHOMA (Group 3)—						
41-43 water white Kerosene	.04	.04⅛	.04	.04⅛	.04	.04⅛
42-44 water white Kerosene	.04¼	.04⅜	.04¼	.04⅜	.04¼	.04⅜
41-43 prime white Kerosene	.03⅞	.04	.03⅞	.04	.03⅞	.04
ROCKY MOUNTAIN STATES—						
*40-42 water white Kerosene	.07¼		.07¼		.07¼	
ARKANSAS—						
41-43 water white Kerosene	.04¼	.04½	.04¼	.04½	.04½	.04¾
42-44 water white Kerosene	.04½	.04¾	.04½	.04¾	.04¾	.05
PENNSYLVANIA—						
43 Kerosene prime white	.03⅞		.03⅞		.03⅞	
45 Kerosene water white	.06⅛		.06⅛		.06⅛	
46 Kerosene water white	.06½		.06½		.06½	
47 Kerosene water white	.07		.07		.07	
36 Miners' Neutral	.06¼		.06¼		.06¼	
34 Neutral	.06½		.06½		.06½	
34 Sundebloomed Neutral	.07½		.07½		.07½	
300 Mineral Seal	.07		.07		.07	
CALIFORNIA—						
40-42 water white (high burning test)	.07½	.08	.07½	.08	.07½	.08
Engine distillate, 43-45 445 end point	.08½	.09	.08½	.09	.08½	.09
Engine distillate, 42-44 480 end point	.07½	.07¾	.07½	.07¾	.07½	.07¾

*Colorado points.

FUEL OILS

CHICAGO DIST. (Based on Group 3)—	Aug. 5		July 29		July 22	
24-26 Fuel Oil (sellers' cars, Group 3)	.75	.80	.75	.80	.75	.80
22-24 (El Dorado)	.80	.85	.80	.85	.80	.85
18-20 (Smackover)	.80	.85	.80	.85	.80	.85
32-36 Gas Oil	.02⅝	.02⅞	.02⅝	.02¾	.02¾	.02⅞
38-40 Straw distillate	.03	.03¼	.03¼	.03⅜	.03⅛	.03⅜
KANSAS—						
24-26 Fuel Oil	.90	.95	.90	.95	.95	1.00
32-36 Gas Oil	.02¾	.03	.02⅞	.03⅛	.02⅞	.03⅛
38-40 Distillate	.03½	.03⅝	.03½	.03½	.03¼	.03½
OKLAHOMA (Group 3)—						
22-26 Fuel Oil (sellers' cars)	.72½	.73	.72½	.77½	.75	.80
24-26 Fuel Oil (buyers' cars)	.70	.75	.72½	.77½	.75	.80
24-26 Fuel Oil (sellers' cars)	.72½	.77½	.75	.80	.77½	.82½
28-30 Fuel Oil (sellers' cars)	.85	.90	.87½	.92½	.87½	.92½
32-36 Gas Oil	.02⅝	.02⅞	.02⅝	.02⅞	.02⅝	.02⅞
38-40 Straw distillate	.05⅛	.03⅜	.03⅛	.03⅜	.03⅛	.03⅜
NORTH TEXAS—						
24-26 Fuel Oil	.72½	.77½	.72½	.77½	.80	.85
26-30 Fuel Oil	.80	.85	.80	.85	.85	.90
32-36 Gas Oil	.02⅝	.02¾	.02⅝	.02⅞	.02⅝	.02⅞
36-38 Gas Oil	.02⅞	.03	.02⅞	.03	.02⅞	.03
38-40 Straw distillate	.03⅛	.03¼	.03⅛	.03¼	.03⅛	.03¼
NORTH LOUISIANA—						
20-22 Fuel Oil	.85	.90	.85	.90	.85	.90
32-36 Gas Oil	.02¾	.03	.02⅞	.03	.02⅛	.03
36-40 Light Straw distillate	.03	.03¼	.03	.03¼	.03	.03¼
ARKANSAS—						
38-40 Distillate	.03⅛	.03¼	.03⅛	.03⅜	.03⅛	.03⅜
32-36 Gas Oil	.03	.03¼	.03	.03¼	.03	.03¼
22-26 Refinery Fuel Oil	.80	.85	.80	.85	.80	.85
GULF COAST (South Texas)—						
Gas Oil	.04	.04¼	.04	.04¼	.04¼	.04¾
Fuel Oil	1.40	1.45	1.45	1.50	1.50	1.60
PENNSYLVANIA—						
30-34 Fuel Oil	.05		.05		.05	.04¾
36-40 Fuel Oil	.05¼		.05¼		.05¼	
CALIFORNIA—						
33-36 Distillate	.03¾	.04¼	.03¾	.04¼	.03¾	.04¼
27-33 Distillate	.04½	.03¾	.03½	.03¾	.03½	.03¾
15-20 Fuel Oil	1.40	1.40	1.40		1.40	

ROAD OILS

CHICAGO DIST. (Based on Group 3)—	Aug. 5		July 29		July 22	
50-60 Asphaltic Content	.95	1.00	.95	1.00	1.00	1.05
60-70 Asphaltic Content	1.00	1.05	1.00	1.05	1.05	1.10
OKLAHOMA (Group 3)—						
40-50 Asphaltic Content	.90	.95	.90	.95	.95	1.00
50-60 Asphaltic Content	.95	1.00	.95	1.00	1.00	1.05
60-70 Asphaltic Content	1.00	1.05	1.00	1.05	1.05	1.10

NEUTRAL OILS

OKLAHOMA (Group 3)—						
Pale Neutrals:	Aug.5		July 29		July 22	
70-80 vis., 2½ color, 20-25 cold test	.04	.04½	.04	.04½	.04	.04½
100 vis., 2 color, 20-25 cold test	.05	.05½	.05	.05½	.05	.05½
100 vis., 3color, 20-25 cold test	.04½	.05	.04½	.05	.04½	.05
150 vis., 3 color, 20-25 cold test	.08½	.09	.08½	.09	.08½	.09
150 vis., 4 color, 20-25 cold test	.08	.08½	.08	.08½	.08	.08½
180 vis., 4 color, 23-28 cold test	.09	.09½	.09	.09½	.09	.09½
180 vis., 3 color, 23-28 cold test	.09½	.10	.09½	.10	.09½	.10
200 vis., 3 color, 23-28 cold test	.11½	.12	.11½	.12	.11½	.12
200 vis., 4 color, 23-28 cold test	.11	.11½	.11	.11½	.11	.11½
220 vis., 3 color, 25-30 cold test	.12½	.13	.12½	.13	.12½	.13
220 vis., 4 color, 25-30 cold test	.11¾	.12¼	.11¾	.12¼	.11¾	.12¼
240 vis., 3 color, 25-30 cold test	.14½	.15	.14½	.15	.14½	.15
240 vis., 4 color, 25-30 cold test	.14	.14½	.14	.14½	.14	.14½
280 vis., 3 color, 25-30 cold test	.16½	.17	.16½	.17	.16½	.17
280 vis., 4 color, 25-30 cold test	.15½	.16	.15½	.16	.15½	.16
Red Neutrals:						
180 vis., 5 color, 23-28 cold test	.08½	.09	.08½	.09	.08½	.09
180 vis., 6 color, 23-28 cold test	.12¼	.12¾	.12¼	.12¾	.12¼	.12¾
200 vis., 5 color, 23-28 cold test	.10½	.11	.10½	.11	.10½	.11
200 vis., 6 color, 23-28 cold test	.13	.13½	.13	.13½	.13	.13½
220 vis., 6 color, 25-30 cold test	.11	.11½	.11	.11½	.11	.11½
220 vis., 6 color, 25-30 cold test	.14¼	.14¾	.14¼	.14¾	.14¼	.14¾
240 vis., 5 color, 25-30 cold test	.13	.13½	.13	.13½	.13	.13½
240 vis., 6 color, 25-30 cold test	.15¼	.15¾	.15¼	.15¾	.15¼	.15¾
280 vis., 5 color, 25-30 cold test	.14½	.15	.14½	.15	.14½	.15

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

180-190 vs., S. R. green, 40-45 cold test...	.07½	.08	.07½	.08	.07½	.08
190-200 dark green, 40-50 cold test.....	.06½	.08	.07½	.07	.06½	.07
170-190 dark green, 40-50 cold test.....	.06	.06¼	.06	.06¼	.06	.06¼
600 E. filtered	.20	.21	.20	.21	.20	.21
590-600 Bright Stock, 150-160 vis.....	.28	.29	.28	.29	.28	.29
600-610 Bright Stock, 190-210 vis.....	.32	.34	.32	.34	.32	.34
Waxes:						
124-126 White Crude Scale Wax.....	.04	.04⅛	.04	.04⅛	.03⅞	.04
PENNSYLVANIA—						
150, 3 color	.20		.20		.20	
18, 3 color	.20¾		.22		.22	
200, 3 color	.22¼		.23¾		.23¾	
220, 3 color	.26¾		.26¾		.26¾	
600, steam refined	.17		.17		.17	
635 steam refined	.20½		.20½		.20½	
650, steam refined	.22¼		.22½		.22½	
600, Pennsylvania flash	.25		.25		.25	
630, Pennsylvania flash	.32		.32		.32	
*550, E. filtered	.19		.19		.19	
*600, E. filtered	.20½		.22½		.22½	
600, E. filtered	.21		.21		.21	
600, D filtered	.27		.27		.27	
550, E filtered	.20		.20		.20	
550, D filtered	.24		.24		.24	
Pennsylvania Bright Stock	.35		.35		.35	
†122-124 White Crude, Scale Wax	.04¾		.04½		.04½	
*122-124 White Crude Scale Wax	.04¼		.04¼		.04¼	

*At Warren, Penn. †At New York City.

GULF COAST (South Texas)—						
Zero Black	.06	.07	.06	.07	.06	.08
No. 2 color, 100 vis., pale oil	.07	.08	.07	.08	.09½	.10½
No. 2 color, 150 vis., pale oil	.10	.11	.10	.11	.14	.15
No. 3 color, 200 vis., pale oil	.12	.13	.12	.13	.14	.15
No. 3 color, 300 vis., pale oil	.15	.16	.15	.16	.14½	.15½
No. 3½ color, 500 vis., pale oil	.16½	.17½	.16½	.17½	.18½	.19½
No. 3½ color, 750 vis., pale oil	.22½	.23½	.22½	.23½	.24	.25
No. 4½ color,1200 vis., pale oil	.24½	.25½	.24½	.25½	.25½	.26½
No. 4½ color, 2000 vis., pale oil.....	.27	.28	.27	.28	.31½	.32½
No. 1½ color, 150 vis., pale filtered	.20	.21	.20	.21	.21	.22
No. 2 color, 200 vis., pale filtered	.22	.23	.22½	.23½	.23½	.24½
No. 3 color, 300 vis., pale filtered	.25½	.26½	.25½	.26½	.26½	.27½
No. 3½ color, 500 vis., pale filtered	.30½	.31½	.31½	.32½	.31½	.32½
No. 3½ color, 750 vis., filtered	.39½	.40½	.38½	.39½	.39½	.40½
No. 5 to 6 color, 200 vis., red oil	.10	.11	.10	.11	.12	.13
No. 5 to 6 color, 300 vis., red oil	.12½	.13½	.12½	.13½	.14	.15
No. 5 to 6 color, 500 vis., red oil	.15	.16	.15	.16	.16	.17
No. 5 to 6 color, 750 vis., red oil	.19	.20	.19	.20	.21	.22
CALIFORNIA—						
200 vis., 2½-3 color	.15	.17	.15	.17	.15	.17
300 vis., 3 -4 color	.16	.19	.16	.19	.16	.19
350 vis., 3½-4 color	.17½	.20	.17½	.20	.17½	.20
400 vis., 4 -4½ color	.19	.20	.19	.20	.19	.20
Red Neutrals:						
200 vis., 4½-5 color	.13	.14	.13	.14	.13	.14
300 vis., 5 -5½ color	.14	.17	.14	.17	.14	.17
400 vis., 5 -6 color	.16	.18	.16	.18	.16	.18
500 vis., 6 -6½ color	.17	.18	.17	.18	.17	.18
600 vis., 6½ plus	.18	.21	.18	.21	.18	.21

NEW YORK DOMESTIC MARKET

	Aug. 5	July 29	July 22
Motor Gasoline:			
Spot Gasoline, Bayonne	.10¾	.13	.13
V. M. P. Naphtha, in steel barrels.....	.18	.18	.18
Lubricating Oil (Industrial) at refinery, Bayonne, N. J.:			
Cylinder, extra light filtered, in barrels....	.44½	.44½	.45½
Cylinder, light filtered, in barrels.....	.38	.38	.39½
Cylinder, Bright Stock	.48½	.48½	.49½
Cylinder, steam refined (609)	.30½	.30½	.31½
Black, in bulk	.12	.12	.13
Bloomless, white, 30-31 gravity, 170 vis.....	.44	.44	.45
Bloomless, 885 specific gravity.....	.16½	.16½	.17½
Red Paraffin:			
170 viscosity	.22	.22	.23
212 viscosity	.23	.23	.25
265 viscosity	.24	.24	.25½
295 viscosity	.26	.26	.30
Paraffin, 903 specific gravity	.31	.31	.31
*Fuel Oil:			
Bunker Oil, 14 plus:			
July 15, $1.75; 16, 1.75; 17, 1.75; 18, 1.75; 19, 1.75; 21, 1.75; 22, 1.75; 23, 1.75; 24, 1.75; 25, 1.75; 26, 1.75; 28, 1.75; 29, 1.75; 30, 1.75; 31, 1.75; August 1, 1.75; 2, 1.75.			
Diesel Oil, at refinery, gallon	.05	.05	.05¼
Furnace Oil, tank wagon, gallon	.10	.10	.10
Gas Oil, delivered in New York.....	.06	.06½	.06½
Wax, fully refined:			
120-122 a.m.m.	.05½	.05⅝	.05
125-127 a.m.p.	.05½	.05½	.05¼
130-132 a.m.p.	.07	.07	.07
135-137 a.m.p.	.08½	.08½	.08½

*Litherage, 6.5c a barrel extra.

NEW YORK EXPORT PRICES

Motor Gasoline, in cases, gallon.....	.26.14	.27.15	.28.15
Motor Gasoline, N. S. Navy, spec. gallon..	.12.25	.13.	.14
Naphtha, 60° F., 50-61 spec. grav.	.13.25	.14.25	.15.28
Naphtha, 60° F., 63-66 spec. grav.	.14.5	.16	.17
Naphtha, 60° F., 66-68 spec. grav.	.16.0	.17.50	.18.50
Kerosene:			
Standard white, in bulk.....	.06½	.06½	.06½
Standard, white, in barrels, gallon.....	.13½	.13½	.13½
Standard white, in cases, gallon.....	.16.9	.16.90	.16.90
Water white, in cases, gallon.....	.07½	.07½	.07½
Water white, in barrels, gallon.....	.14½	.14½	.14½
Water white, in cases, gallon.....	.17.9	.17.90	.17.90

LOS ANGELES EXPORT PRICES

	Aug. 5		July 29		July 22	
Kerosene:						
Water white	.04	.04½	.04	.04½	.04	.04½

CRUDE OIL PRICES

July 26.—Magnolia Petroleum Co. reduced Luling crude 10 cents. Owens Refining Co. reduced Rockdale-Minerva crudes 25 cents.

July 28.—Grayburg Oil Co. established four-gravity basis for Somerset, Texas, crudes with lower prices.

July 30.—Ohio Oil Co. and Midwest Refining Co. reduced Wyoming and Montana crudes 10 cents except Sunburst, where reduction was 3 cents. This reduction applied to Salt Creek as did the reduction of 15 cents on July 29, applying generally to these fields. Ohio Oil Co. reduced Wooster crudes 25 cents.

August 2.—Indian Refining Co. and Paragon Development Co. reduced western Kentucky crudes 5 cents. Corning crudes reduced 15 cents.

August 5—Paragon Development Co. reduced Cumberland and Monroe County crudes 15 cents.

August 5. — Joseph Seep Purchasing Agency reduced all grades Pennsylvania crude 25 cents; Cabell, Somerset medium and somerset light were reduced 15 cents; Ragland was reduced 10 cents.

Arkansas and North Louisiana

Caddo, 38° and above.....$1.35	
35° to 37.9°.....	1.25
32° to 34.9°.....	1.15
Below 32°.....	1.00
Homer, 35° and above.....	1.35
33° to 34.9°.....	1.25
31° to 32.9°.....	1.15
Below 31°.....	1.00
Haynesville, 33° and above.....	1.25
Below 33°.....	1.15
El Dorado, 33° and above.....	1.35
Below 33°.....	1.25
Bull Bayou, 38° and above.....	1.30
35° to 37.9°.....	1.15
32° to 34.9°.....	1.00
Cotton Valley.....	.80
De Soto.....	1.35
Crichton	1.15
Bellevue	1.25
Smackover, 26° and above.....	.95
25° to 25.9°.....	.80
24° to 24.9°.....	.70
Below 24°.....	.60
*Stephens, Ark.:	
Below 23°.....	.85
23° to 25.9°.....	1.05
26° to 27.9°.....	1.20
28° t 31°.....	1.25

*Posted by Atlantic Oil Producing Co.

Wyoming and Montana

Rock Creek (Wyo)	1.20
Salt Creek	1.10
Big Muddy	1 00
Mule Creek	.60
Grass Creek (light)	1.45
Elk Basin	1.45
Lance Creek	1.40
Osage	1.40
Cat Creek (Mont.).....	1.45
Sunburst (Mont.)	.90
Lost Soldier	.78
Greybull and Torchlight	1.40
Hamilton Dome	1.05

Lander based on contracts covering entire production of fields.

Oklahoma, Kansas, North and Central Texas

Prairie Oil & Gas Co. and other major purchasing companies, except as noted:

Below 30°.....$1.10	
30° to 32.9°.....	1.25
33° and above.....	1.50
Magnolia Petroleum Co.:	
Below 28°.....	.90
28° to 30.9°.....	1.00
31° to 32.9°.....	1.10
33° and above.....	1.25
Corsicana Light.....	1.25
Corsicana Heavy.....	.90
Mexia	1.25
Powell	1.25
Thrall	1.00

Humble Oil & Refining Co.

Below 30°.....$1.00	
30° to 32.9°.....	1.20
33° to 35.9°.....	1.40
36° and above.....	1.39
Wichita and Archer Counties.....	1.50
Corsicana Light.....	1.50
Mexia	1.50
Powell	1.50
Currie	1.50

Gulf Coast

Grade "A".....$1.50	
Grade "B".....	1.30
Luling	.90
Laredo 75	
Milam County.....	1.35
Rockdale-Minerva (Milam County)	1.35
Above 39° gravity.....	1.80
Calliham (Live Oak-McMullen)...1.68½	

***Somerset**

Under 28° gravity	.90
28 to 30.9	1.00
31 to 32 9	1.10
33 and above	1.25

*Posted by Grayburg Oil Co.

California

14° to 14.9°.....$1.00	
20° to 20.9°.....	1.01
21° to 21.9°.....	1.02
22° to 22.9°.....	1.03
23° to 23.9°.....	1.05
24° to 24.9°.....	1.07
25° to 25.9°.....	1.10
26° to 26.9°.....	1.13
27° to 27.9°.....	1.16
28° to 28.9°.....	1.19
29° to 29.9°.....	1.22
30° to 30.9°.....	1.25
31° to 31.9°.....	1.28
32° to 32.9°.....	1.31
33° to 33.9°.....	1.34
34° to 34.9°.....	1 37
35° gravity and above.....	1.40

Eastern States

Penna Grade Oil in New York Transit Lines $3.00	
Bradford District Oil in National Transit Lines	3.00
Penna Grade Oil in National Transit Lines	2.75
Penna Grade Oil in Southwest Pa. Pipe Line Lines	2.75
Penna Grade Oil in Eureka Pipe Line Lines	2.75
Penna Grade Oil in Buckeye Pipe Line Lines	2.75
Cabell Grade Oil in Eureka Pipe Line Lines	1.45
Corning Grade Oil in Buckeye Pipe Line Lines	1.75
Somerset Medium Oil in Cumberland Pipe Line Lines.....	1.55
Somerset Light Oil in Cumberland Pipe Line Lines	1.70
Ragland Grade Oil in Cumberland Pipe Line Lines	.90
Lima	1.83
Wooster	1.65
Illinois	1.62
Indiana	1.63
Princeton	1.62
Plymouth	1.00
Waterloo	1.10
†Oil Springs, Canada.....	2.30
†Petrolia, Canada.....	2.23
*Western Kentucky, 36° and above	1.50
*Western Kentucky, 33° to 35.9°..	1.40
*Western Kentucky. 32.9° and below	1.30
Cumberland and Monroe Counties, (Ky.), (Paragon Dev. Co.).....	1.90

†Plus Government bounty of 26¼c.

*Prices for Warren, Allen, Hancock, and Ohio Counties by Indiana Refining Co. Prices for Warren and Simpson Counties by Paragon Development Co.

Mexican Crude

*Tuxpam (f.o.b. Mexican ports)...$1.40	
†Panuco (f.o.b. Mexican ports)...	1.15
Tuxpam (New York).....	1.97
Panuco (New York).....	1.57

*Plus 31.92c tax. †Plus 17.40c tax. Prices based on contracts.

When Oil World First Started Westward

Discovery of Old Lima Field Moved Its Center 300 Miles. No Market for Product Until Dr. Frasch Extracted Sulphur

By Whit

When oil was found in a well that was being drilled for gas, on the grounds of the Lima Strawboard Mill, at Lima, Ohio, in 1885, the center of the oil world was moved 300 miles westward.

The movement has never stopped from that date, and now the oil frontier of this hemisphere has outlaying points near the Arctic Circle, and, skirting the Pacific Slope extends to our most southwesternly State, and yet farther southward to Mexico, Central and South America.

Looking back at the great strides the prospector has made in the last quarter century, one is not so much amazed at the scope of his operations as at the fact they were so long delayed.

Ohio had more than 2,000 oil wells before the name "Lima" was given to the new district, and natural gas fields in the center of the State were put to commercial use years before the Findlay district created a natural gas furor in Northwestern Ohio.

Even in Findlay itself houses were heated and meals cooked with natural gas as far back as 1837, and two years before that date a well only 10 feet deep in which gas had been struck was ignited and continued to burn until the rain and snow of the following winter drowned it out.

Piped Through Gun Barrel

In 1838 Daniel Foster dug a well at his home on the corner of Main and Hardin streets in Findlay, which produced sulphuretted water and an abandance of gas. Mr. Foster turned the latter to account by placing an inverted sugar kettle in the well, and from this small dome led the gas by wooden pipes to his fireplace, where he utilized it in an improvised burner made from an old gun barrel.

This was still burning a half century later, when the Karg and other famous wells in and about Findlay were spouting their millions of feet of gas heavenward, with a reckless disregard for Nature's gifts that now seems little short of criminal.

The earliest of Ohio's oil fields, was, of course, the Macksburg district, whose low-lying "white sand" pools were later to be regarded as extensions of the main Pennsylvania Field, which, as a matter of fact, they ante-dated.

Going back, as far as can be learned, oil was first found in what is now Noble County, and within 1 mile of Caldwell, the county seat, in a well drilled by a Mr. Thorley in 1814 and probably as far back as 1812. This well was drilled for salt, when oil was found at a depth of 185 feet. In 1816 Robert McKee began drilling for salt water. Oil was found.

Second in the oil history of the State comes the "Mecca" Field in Trumbull County in northeastern Ohio, where from 2,000 to 2,500 shallow wells of about 50 feet were "kicked down," at a date beginning in 1860.

Mecca oil is a high grade lubricant—26 to 28 B—which at one time sold for as much as $50 a barrel. It was found in a small tract of less than 20 square miles, and the best of the wells never produced more than 70 barrels a day when they were first drilled in.

Original Seneca Oil

The real pioneer in Ohio, the Macksburg Field, was one of the producers of the original "Seneca Oil." This was gathered first from sand pits in West Virginia and sold to Bosworth & Wells, of Marietta, Ohio. It was bought for 25 cents a gallon and in 1843 five barrels of Seneca oil were shipped by them to New York by water via the river route to New Orleans and by coast-wise ships to a New York drug house which paid 90 cents a gallon for the product.

This was the main ingredient of the "Mustang Liniment" and the "Nerve and Bone" liniment with which our granddaddys greased their rheumatic joints.

Ohio's first production was oil of this sort, collected from wells drilled for brine in the Duck Creek Valley of Noble County. Actual drilling with the idea of getting petroleum as the principal product followed closely after the successful search for oil in Oil Creek's Valley, Pennsylvania.

This development led by way of the Cow Run oil field near Marietta, to the true Macksburg field half a mile from the town of that name, and the discoveries there paved the way for the speculative era in Ohio that extended from 1864 to 1877, but as the limits of the eastern Ohio productive geological formation were soon fairly well defined, very little thought was given to oil possibilities in the wholly different strata in the western part of the State.

As a result of the explorations of that date, however, natural gas was discovered in Knox County by Peter Neff, who personally spent many thousands of dollars in making a thorough search in that district, with operations that extended over a decade from 1865.

Used for Lamp Black

He found practically no oil, but a good quantity of natural gas, and this he used in the manufacture of lamp black of a high quality which was sold to manufactures of printers ink.

If the writer may be pardoned the introduction of a personal note, mention may be made of the fact that the Neff operations were a source of boyish interest in his prep school days at Gambier, the seat of Kenyon College.

It would seem that many others were no wiser than the boys of that day, or that for some inscrutable reason progress is delayed until all the conditions for real production in any line are ripe. At all events, Ohio's natural gas and oil age was not to begin for another decade ,and it fell to Findlay to give it its first big push.

Although Dr. Charles Oesterlin, of Findlay, advised the construction of reservoirs for natural gas as far back as 1864, the town merely regarded its presence as a nuisance until 20 more years had rolled around. One company did drill into the upper limestone in 1865, but the tools were broken at 135 feet in the rock, and abandoned.

It was almost impossible to dig a water well anywhere in Findlay without encountering the undesirable gas, and sewer excavations revealed its presence in every part of the city.

In 1883 and 1884 there was a renewal of interest in test wells in several parts of Ohio, and Doctor Oesterlin is to be credited with inaugurating the Findlay Natural Gas Company, an association of public-minded citizens who began drilling operations with a capital of $5,000.

Trenton Rock Strike

The first location was on the east side of Eagle Creek, just outside the corporation limits, at a point which contained a gas spring. Gas was found at 314, 516, 518 and 640 feet, with increased pressure at each new discovery; the aggregate furnishing ample gas for drilling. A small quantity of oil was found at 718 feet, and at 1,092 feet, early in November, the Trenton Rock yielded a large flow.

What the daily production of this well really was can only be estimated by comparison with later wells accurately measured. It was probably between 200,000 and 300,000 feet.

Drilling was continued until the drill reached 1,648 feet, and it had been in salt water for some 70 feet. As a result the value of the well—which represented an investment of $3,200—was greatly impaired.

This was the first well to find petroleum or natural gas in Trenton Rock, and the discovery was a much greater surprise to geologists than it was to the drillers. The Trenton is one of the oldest of the limestone formations, and is known to extend from New England to the Rocky Mountains, and from the islands north of Hudson Bay to the south end of the Allegheny Mountains. It is the first wide-spread limestone of the general scale, and thus is the floor of the many states in which it does not reach the surface in at any point.

Thus it belongs—geologically—far beneath all coal measures and it was not conceived that it would contain any hydro-carbon deposits, either gaseous or fluid.

This rock takes its name from Trenton Township, in Oneida County, New York, where the picturesque cascades known as the Trenton Falls flow through a channel that the water has cut through this limestone.

Result of Mighty Upheaval

The Trenton Rock comes to the surface at Point Pleasant, Ohio, as a result of what the geologists term the Cincinnati Anticlinal. This—the result of a mighty upheaval in the early rocks of out State—has raised the Trenton to the surface at one point near Cincinnati, and from there it slopes gradually downward until the top of this formation is nearly 1,100 feet below the surface at Findlay, and a little more than 100 feet deeper at Lima. This rock varies from about 175 feet in thickness as found in Kentucky, to many times that thickness in the center of Ohio. It overlies a sandstone that it is believed was formed at a time when the earth was without life of any sort—animal or vegetable—from whose remains oil might have been produced.

As the Trenton itself is palpably not an oil-bearing rock, it follows that it must be a reservoir for oils created in the upper measures by some form of Nature's distillation or filtration processes.

While the geological sharps were startled by the discovery of oil and gas in the Trenton, they were not inclined to believe that a really important and productive field had been found. In other words, they had the Trenton properly listed and classified in a scheme of things in which petroleum played no part.

When Lima's second well was drilled in with a good showing of oil, Edward Orton, Ohio's venerable State Geologist, said after an extended survey of the field that while the production would not be large in or around Lima, some very large wells would probably be found if drilling were done in the marsh region 25 miles easterly from Lima.

"Professor Drill" Best

To this "Farmer" Dean made the well known and oft quoted statement that "Professor Drill knocked the spots off all other known sorts of professors."

Lima was the third stepping stone in the Northwestern Ohio development as at Bowling Green, midway between Toledo and Findlay, and to be exact, 24 miles north of Findlay, a well was begun on February 4, 1885; the contractors being Brownyar & Martin, who had drilled the first Findlay well.

This well was regarded as almost a failure, and the drill went nearly 200 feet into the Trenton without increasing the flow, but, fortunately, without damaging the well. It was shot with 300 pounds of rack-rock—which was regarded at that time as giving the well a real hard knock. This released a fair supply of of gas which was utilized for a number of years.

Bowling Green wells, Three, Four and Five, were only moderate in size, yet that region was later to show the greatest oil production in the Lima Field.

Lima's first well was drilled by B. C. Faurot, Lima's second wealthiest citizen, in order to get a supply of gaso f r his strawboard mill boilers.

(Continued on Page 140)

REED ROLLER BIT COMPANY — The Bit with the Bite

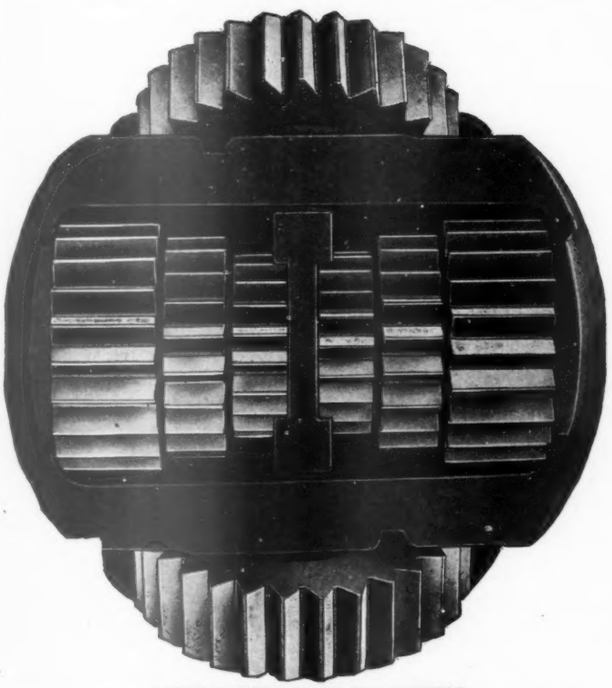
Leaves no junk in the hole

Get SPEED With the Reed

Speed is highly desirable and incidentally profitable in operation—IF speed can be obtained with safety. The Reed Roller Bit affords absolutely safety with speed.

Notice the mechanical build of a Reed bit which gives all the strength of a forge hammer. Wide cutting surface of bithead is one secret of fast cutting while the reamer gives you full gauged, smooth-walled holes STRAIGHT DOWN, so that casing can be set easily and without obstructions. When a hole is made with a Reed Bit and Reamer it is a finished hole—all at one drilling.

It is possible to excel speed records with Reed Roller Bits and yet enjoy the maximum of safety.



CUTTING SURFACE OF THE BITHEAD

Above is shown view of large bithead with six cross rollers. Smaller sizes have four cross rollers. Arrangement of cutters revolve on different centers and attack rock at different angles—a distinct cutting action that makes the Reed Bit speediest of all rock tools.

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The idea is a very simple one; slush is pumped (with full force) through bearings instead of oil, thus clears bearings of grit and sand, preventing friction and eliminating useless up and down trips for refilling lubricator chambers.

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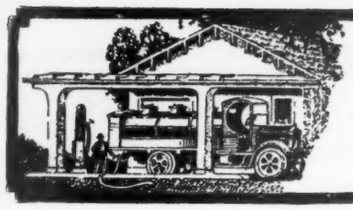

TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, August 5

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

Main Service Station Price

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero. Tank wagon
†100 gals or more	14.25	...	18.0	11.0

Tank wagon prices on April 10, 1922, g. up 1½c; May 8, g. up 1c; June 27, both up 1c; July 19, g. down 2c, k. down 1c; Oct. 10, g. down 2c; Oct. 21, g. down 1c; Feb. 5, 1923, g. up 1c; Feb. 20, g. up 1c; Aug. 14, g. down 6.6c; Oct. 4, k. down 1½c; Nov. 10, g. down 1.4c; Dec. 29, g. up 2c; Jan. 12, 1924, g. up 2c, k. up 1c; Feb. 5, g. up 2c, k. 1c; July 18, g. down 1c; July 30, g. and k. down 1c.

Decatur, Ill.	16.2	...	18.2	11.5
East St. Louis	15.1	...	17.35	10.6
Joliet	16.4	...	18.4	11.7
Peoria	16.2	...	18.2	11.5
Quincy	16.2	...	18.2	11.3
Davenport, Ia.	15.0	...	18 5	11.9
Des Moines	16.0	...	18.5	11.9
Keokuk	16.5	...	18.5	11.9
Sioux City	15.0	...	18.5	11.5
Duluth, Minn.	17 2	...	19.2	12 6
Minneapolis	12.0	...	16.0	12.6
La Crosse, Wis.	17.2	...	19.2	12.4
Milwaukee	15.0	...	18.0	11 3
Madison	16.3	...	18.3	11.5
Detroit, Mich.	16.8	...	18.8	12.2
Grand Rapids	16.7	...	18.7	12.1
Saginaw	16.9	...	18.9	12.3
Evansville, Ind.	18.0	2.0	20.0	11.5
Fort Wayne	18.4	2.0	20.4	11.9
Indianapolis	18 2	2.0	20.2	11.7
South Bend	18.4	2.0	20.4	11.9
Fargo, N. D.	18.6	1.0	20.6	14 6
Huron, S. D.	18.0	2.0	21.0	13.1
Sioux Falls	18.0	2.0	20.0	12.6
*Kansas City, Mo.	12.9	1.0	18.9	10.3
Springfield	16.8	...	18 8	11.2
*St. Louis	15.6	0.5	18.9	11.0
*St. Joseph	16.0	0.5	18.0	11.2
Wichita, Kans.	15.3	...	17.8	10.8
Bartlesville, Okla.	18.4	2.5	21.4	10.9

*City tax.
†Tank wagon price on less than 100 gallons, 16c.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero. Tank wagon
Newark, N. J.	17.5	...	....	13.0
Atlantic City	17.5	...	....	13.0
Annapolis, Md.	19.0	2.0	21.0	12.5
Baltimore	19.0	2.0	21.0	12.5
Cumberland	19.0	2.0	21.0	12.5
Washington, D. C.	19.0	2 0	21.0	12.5
Norfolk, Va.	20.5	3.0	22.5	13.5
Petersburg	20.5	3.0	22 5	13.5
Danville	20.5	3.0	22.5	13.5
Richmond	20.5	3.0	22.5	13.5
Roanoke	20.5	3.0	22.5	13.5
Keyser, W. Va.	19.0	2.0	....	13.5
Charleston	19.0	2.0	....	13.5
Parkersburg	19.0	2.0	....	13.5
Wheeling	19.0	2.0	....	13.5
Charlotte, N. C.	20.0	3.0	....	13.5
Hickory	20.0	3.0	....	13.5
Mt. Airy	20.0	3.0	....	13.5
Salisbury	20.0	3.0	....	13.5
Charleston, S. C.	20.5	3.0	....	14.0
Columbia	20.5	3.0	....	14.0

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero. Tank wagon
Atlanta, Ga.	20.0	3.0	24.0	14.0
Augusta	22.0	3.0	24.0	14.5
Macon	22.0	3.0	24.0	15 5
Savannah	18.0	3.0	20.0	14.0
Birmingham, Ala.	20.0	2.0	22.0	15.5
Mobile	19 0	2.0	21.0	13.5
*Montgomery	21.0	3.0	23.0	16.5
Clarksdale, Miss.	19.0	3.0	22.0	13.0
Jackson	19.0	3.0	22.0	10.0
Natchez	18.5	3.0	21.5	12.5
Vicksburg	18.5	3.0	21.5	12.5
Jacksonville, Fla.	20.0	3.0	22.0	14.0
Miami	22.0	3.0	24 0	15.5
Pensacola	20.0	3.0	22.0	14.5
Tampa	20.0	3.0	22.0	14.0
Lexington, Ky.	20.0	3.0	23.0	15.0
Covington	17.0	3.0	20.0	15.0
Louisville	16.0	3.0	18.0	12.0

*In addition to State tax of 2 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and ½ cent on kerosene.

PACIFIC COAST DISTRICT

Standard Oil Co. (California)

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero. Tank wagon
an Francisco	17.0	2.0	20.0	15.5
Los Angeles	16.0	2.0	19.0	16.5
Fresno	17.5	3.0	20.5	17.5
Reno, Nev.	20.5	3.0	23.5	19.0
Portland, Ore.	19.0	3.0	22.0	16.5
Seattle, Wash.	18.0	3.0	21.0	16.5
Tacoma	18.0	3.0	21.0	16.5
Spokane	22.0	3.0	25.0	20.5
Phoenix, Ariz.	23.0	3.0	26.0	21.5

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero. Tank wagon
Albany, N Y.	17.0	...	21.5	13.0
*New York	19.0	...	23.0	13.0
Buffalo	15.5	...	18.5	13.0
Rochester	15.0	...	19.0	12.0
Syracuse	16.0	...	21.0	11.0
Boston, Mass.	17.0	...	20.0	13.0
Providence, R. I.	18.0	...	22 5	13.0
Augusta, Me.	19.0	1.0	21.5	13.0
Manchester, N. H.	19.0	2.0	21.5	13.0
Burlington, Vt.	19.0	1.0	21.5	13.0

*Price in steel barrels.

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of stat on	Kero Tank wagon
Denver, Colo.	19.0	2.0	21.0	13.5
Glenwood Spgs.	23.0	2.0	....	17.5
Pueblo	19.0	2.0	21.0	14.5
Billings, Mont.	21.5	2 0	23.5	14.5
Butte	23.0	3.0	25.0	15.0
Great Falls	23.0	3.0	25.0	16.0
Helena	23.0	3.0	25.0	16.0
Miles City	22.5	3.0	24.5	15.5
Boise, Idaho	24.5	2 0	26.5	19.0
Salt Lake, Utah	23.0	2.5	25.0	17.0
Ogden	23.0	2.5	25.0	17.0
B n Wyo.	20 0	1.0	.. .	14 0
Casper	18.0	1.0	20.0	12.0
Cheyenne	19.5	1.0	21.5	13.5
Cody	21.0	1.0	....	15.0
Lander	20.0	1.0	....	14.0
Albuquerque, N. M.	20.0	1.0	22.0	16.5

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND

Atlantic Refining Co.

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero. Tank wagon
*Pittsburgh, Pa.	18.0	...	23.0	14.0
*Philadelphia	18.0	...	23.0	14.0
*Scranton	18.0	...	23.0	14.0
*Allentown	18.0	...	23.0	14.0
*Altoona	18.0	...	23.0	14.0
Dover, Del.	20 0	2.0	23.0	14.0
Wilmington	20.0	2.0	23.0	14.0
Providence, R. I.	20.0	...	23.0	14.0
Springfield, Mass	20.0	...	23.0	14.0
Worcester	20.0	...	23.0	14.0
Boston	20 0	...	23.0	14.0
Hartford, Conn.	21.0	...	24.0	14.0
New Haven	21.0	1.0	24.0	14.0

*Pennsylvania tax of 2 cents is collected by the dealer and paid by him direct to the State.

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero. Tank wagon
Omaha	11.0	...	13.0	11.5
Crawford	17.0	...	....	12.25
McCook	15.0	...	17.0	13.0
Norfolk	14.75	...	16.75	12.0
North Platte	16.0	...	15 0	12.75
Scotts Bluff	17.25	...	19.25	12.25

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero. Tank wagon
Dallas, Tex.	14.0	1.0	18.0	10.0
Fort Worth	14.0	1.0	17.0	11.0
Houston	16.0	1.0	19.0	12.0
San Antonio	14.0	1.0	17.0	10.0
El Paso	12 0	1.0	14.0	12.0
Muskogee, Okla.	16.0	2.5	21.0	11.0
Oklahoma City	15.5	2.5	20.5	11.0
Tulsa	13.0	2.5	18.0	11.0
Ft. Smith, Ark.	17.0	4 0	20.0	12.0
Little Rock	20.0	4.0	23.0	13.0
Texarkana	19.0	4.0	22.0	12.0

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero. Tank wagon
New Orleans, La.	15.5	2.0	18.5	9.0
Alexandria	17.5	2.0	20.5	13 0
Baton Rouge	16.0	2.0	19.0	11.5
Lake Charles	17.5	2.0	20.5	13.0
Shreveport	17.5	2.0	20.5	13.0
Memphis, Tenn.	16.0	2.0	18.0	14.0
Chattanooga	17.0	2.0	19.0	14.5
Knoxville	19.5	2.0	21.5	15.0
Nashville	18.5	2.0	20.5	13.5
Bristol	20.0	2.0	22.0	13.5
Little Rock, Ark.	20.0	4.0	22.0	13.0

OHIO

Standard Oil Co. (Ohio)

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero. Tank wagon
All Ohio Points.	17.0	...	19.0	14.0

TANK WAGON CHANGES

July 25.—Continental Oil Co. reduced gasoline tank wagon and service station prices 1 cent and kerosene tank wagon 1 cent at Utah points. Same company reduced kerosene tank wagon price 1 cent at Boise, Idaho. Same company reduced gasoline tank wagon and service station price 1 cent and kerosene tank wagon price 1 cent at Albuquerque, N. M.

July 28.—Standard Oil Co. of Kentucky reduced kerosene tank wagon price 1 cent at several Mississippi points and 2 cents at Louisville, Ky. Same company reduced gasoline tank wagon price 1 cent at Covington, Ky., and gasoline tank wagon and service station prices 3 cents at Louisville, Ky.

July 30.—Standard Oil Co. of Indiana reduced gasoline tank wagon and service station prices and kerosene tank wagon prices 1 cent in entire territory at points where normal schedules were in effect. The reduction at Chicago applied to both large and small dumps. Standard Oil Co. of Nebraska reduced gasoline tank wagon and service station prices 1 cent in Nebraska where normal schedules were in effect.

July 31.—Standard Oil Co. of Nebraska reduced kerosene tank wagon and service station prices 1 cent in Nebraska where normal schedules were in effect.

August 1.—Standard Oil Co. of Kentucky reduced gasoline tank wagon price 1 cent at Lexington and gasoline tank wagon and service station prices 2 cents at Covington, Ky. Standard Oil Co. of Louisiana advanced gasoline tank wagon and service station prices in Louisiana 1 cent to cover increase in State road tax from 1 to 2 cents. Same company has reduced gasoline tank wagon and service station prices 1½ cents at Chattanooga.

SATISFACTORY WEEK IN CALIFORNIA MARKET

LOS ANGELES, Cal., Aug. 2.—The past week was a satisfactory one to the oil marketers on the Pacific Coast. Nothing spectacular happened and no price changes are noticeable. The volume of sales was very pleasing. The local gasoline market is firmer than for some time. In southern California bootlegging activities are a shade less pronounced and in the rest of the Pacific Coast territory the big marketing companies are maintaining prices in a satisfactory manner.

Export gasoline is moving at prices somewhat below the refinery prices quoted for the local trade, but there is no great pressure to sell at the reduced prices required when competing in the Atlantic Seaboard and European trade.

Natural gasoline is ruling steady at 10½ to 11 cents per gallon, with very little offered except on extended contracts.

A practice is developing among certain distributors and service station operators of offering free of charge one quart of so-called eastern lubricating oil with each five gallons purchased. So far as can be determined now most of this oil is actually a California oil with sufficient Eastern or Mid-Continent bright stock added to give a green outer tone. This practice, while annoying, has not yet reached sufficient proportions to warrant action on the part of the several associations of marketers on the Pacific Coast. It is being carefully watched, however, and is naturally frowned upon by the larger marketers who regard it as an indirect rebate. Large refiners of lubricating oil on the Pacific Coast report their volume of sales is very satisfactory, although the price level is such that only a small profit can be made on this business.

The fuel oil market is still strong, but lately several of the largest California companies have refused offers of fuel oil for acceptance over the next few months. For the past half year or more these companies have consistently bought up, at prices ranging from $1 to $1.20 per barrel, all fuel oil offered by the small refining companies in California. The present indisposition to accumulate additional stocks of fuel oil may be laid to the fact that the present fuel inventories in California stand at just about an even 50,000,000 barrels.

MID-CONTINENT REFINERY OPERATIONS FOR WEEK ENDING JULY 26

Refineries in the Mid-Continent reported a decrease of 3,841,461 gallons or 3.01 per cent in gasoline stocks for the week ending July 26, according to the regular statement of the Western Petroleum Refiners Association. At that time the 141 reporting refineries had only 123,780,358 gallons in storage. During the week preceding gasoline shipments fell off 2.43 per cent, and the output increased 745,219 gallons or 2.74 per cent, to a total of 27,990,140 gallons. Kerosene output decreased 236,840 gallons or 3.43 per cent; shipments increased 23.45 per cent and stocks showed a decrease of 28,245 gallons or 0.12 per cent Gas and fuel oil output increased 114,973 gallons or 0.35 per cent; shipments increased 1.22 per cent and stocks showed an increase of 3,025,892 gallons or 2.86 per cent to a total of 108,931,512 gallons. Runs to stills increased 60,181 barrels or 3.28 per cent to a total of 1,895,676 barrels.

CONSOLIDATED STATEMENT COVERING MID-CONTINENT REFINERIES FOR THE WEEK ENDING 7 A. M. JULY 26, 1924

	Kansas	Oklahoma	North and Central Texas	North Louisiana and Arkansas	Mid-Continent Total	July 19, '24	June 28, '24	May 31, '24
Number of refineries reporting	27	53	42	10	141	141	141	140
Daily still capacity, barrels	102,600	265,700	105,550	25,000	498,850	498,850	498,850	482,850
Combined operations during week—								
Materials to stills, barrels—								
Crude, item A	407.309	791.016	359,580	87.534	1,645,439	1,642,372	1,678,077	1,619,075
Other oils (see note), item B	34.853	150.294	51.090	14,000	250.237	193,123	209.893	221.720
Total	442.162	941,310	410670	101,534	1,895,676	1,835,495	1,887,970	1,840,795
Output, gallons—								
Gasoline, item C	6,877,626	14.115,080	6,066,800	930.634	27,990.140	27,244,921	28,976,566	26,985,496
Kerosene, item D	1,720.363	3.523.764	1,115,866	310,287	6,670,280	6,907,120	6,492,310	5,928,918
Gas and fuel oil, item E	8,568,870	15,272,883	7,297,082	2,004,011	33,142,846	33,027,873	32,627,269	31,547,038
Stocks on hand at close of week—								
Materials for stills, barrels—								
Crude, item J	427.363	4,068,482	1,138,889	812,865	6,457.599	6,604,414	7,031,036	7,279,963
Other oils (see note), item K	120,244	1,244.114	244,504	510,617	2,119,479	2,112,510	2,066,919	2,058,000
Finished products, gallons—								
Gasoline, item L	15,073,688	92.483,573	15,641.365	581,732	123,780,358	127,621,819	132,807,524	141,088,404
Kerosene, item M	4.371,316	13.194.969	4,983,258	166.786	22,716.329	22,744,574	20,322,026	16,755,707
Gas and fuel oil, item N	13,738,317	77.084,755	14,339,526	3,768,914	108.931,512	106,905,620	101,865,354	95,143,313

Note—Other oils includes all oils other than crude which are either purchased or withdrawn from stocks and run to stills during the week. The total of items A and B is, therefore, the net quantity of materials consumed by the reporting refineries in producing the quantities of products shown as the result of the operations of the refiners during the week. Item K includes all sticks of oils, other than crude, held for further refining.

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Manufacture of Fishing Tools an Art

Primarily a Work of Service, Even to the Rental Feature, and for Mutual Helpfulness of All Concerned

By Ralph T. Baker

The manufacture of fishing tools is based on the principle of service. Fishing tools are the necessary auxiliary articles of equipment used in drilling a well. In some cases the success or failure of the hole depends upon the contractor's ability to secure the right fishing tool at the right time. Many thousands of dollars are saved or lost, depending upon a fishing tool's design and construction. The matter of keeping fishing tools in stock, ready for call by the contractors, in addition to the equipment used in machine shops where special tools can be made, is founded upon the principle that service is the ruling motive behind all business success.

"The entire fishing tool business is almost 100 per cent service," declared the manager of one of the largest supply companies, with drilling and fishing tools in all parts of the country. "We make little profit out of the fishing tool business in itself, but we put in a lot of time and money in keeping up this very important phase of drilling tool manufacture for the sole purpose of giving the needed service at the right time to the men in the field who use our line of tools for drilling. Of course, we aid others who come to us with their problems, but that is just another phase of the service idea that is behind our work.

View of modern lathes used in manufacturing drilling and fishing tools.

To Mutual Advantage

"In a number of cases, contractors go to work on a well after having purchased a string of tools upon which a large amount of credit has been allowed by the concern selling the tools. The contractor goes ahead with the job and has no trouble perhaps until he reaches a deep level; where he encounters a bad fishing job. The supply company is vitally interested in the completion of this hole and it does everything to aid the contractor so affected, because the payment on the tools in many instances is affected by the ability of the contractor to finish his hole and collect payment from the operating company.

"On the other hand, the supply companies carrying large lines of fishing tools, as well as the fishing tool specialty manufacturers, are interested in the individual success of the contractors and drillers regardless of any intimate financial connections. When contractors are able to finish their holes with a minimum amount of trouble, more work is made possible, more drilling tools are sold to the contractors and all firms are eventually benefited. So the successful completion of wells is of vital interest to the supply companies and fishing tool manufacturers, who strive in every way to give the drillers and contractors all possible assistance in their work."

Even under the classification as an essential in drilling, fishing tools show a comparatively small return on the investment for the manufacturer and distributor. The primary reason for this condition lies in the fact that most of the fishing tools are put out on a rental basis. Very few are purchased outright by the contractors. The reason for this practice can be readily seen. The contractor has his hands full looking after the tools and various pieces of equipment which are put into actual use on every hole. His freight and hauling bills in getting his equipment to the well site run into large figures. Every fishing tool added to his standard line of drilling tools makes just that much more equipment to watch and keep up and pay freight upon.

On Rental Basis

For this reason, contractors have been accustomed to waiting for the occasion to arise, then sending to the nearest supply stores where the specific tool needed is carried. In this way the contractor avoids a makeshift job on the part of a driller who might often use the handiest fishing tool if it were carried at the derrick rather than wait for the exact tool required which is kept at a nearby supply store. Thus the contractor avoids drilling tools for reasons of economy and safety as well.

This actor does not help the manuacturers and distributors of fishing tools, however. Branch stores with stocks of standard fishing devices must be maintained by manufacturers in every active field. The stock often will lie idle for several days before a tool is rented. In most cases these stock tools are then returned after two or three days of use. The rental charges are nominal. An average price quoted by one large distributor of fishing tools is based on a rental per tool of $12 for three days' use by the contractor.

In addition to this large investment in idle tools which must be carried in stock in the stores, the manufacturer is compelled to carry a large assortment of spare parts for each tool which has any adjustable or breakable parts that may become worn or broken during use by the contractor. The manufacturer also has a large investment in machines which are used for the manufacture of fishing tools. He has a large supply of raw material for the making of rush orders and special devices and he is compelled to employ only the most able mechanics who are thoroughly familiar not only with the manufacturing end of the work but who also have a knowledge of the use to which the tools are eventually put.

Fishing Tool Specialists

Along this line it is not uncommon for a contractor to go to a store manager or factory manager with his tale of woe. He may spend considerable time telling how he has fished for several days, borrowing and renting tools which have done no good in cleaning the hole. Right here it might not be out of the way to remark that several manufacturers and fishing tool specialists are firm in their opinion that "a fishing job is not bad until it is made bad."

For this reason, the manufacturers often are compelled to make special tools which will be applicable only to the fishing job in question but which will enable the contractor to clear his hole and finish the job, upon which he may have spent $50,000 in drilling and an additional $10,000 in fishing before approaching the manufacturer.

In these cases, the manufacturers are compelled to display a shrew sense of diplomacy as well as a thorough knowledge of oil field conditions and manufacturing ability. It is true that fishing tool makers carry out each individual problem, "from the idea to the finished product," as stated in one firm's motto. As an example, a contractor may be worn out from several days of fruitless fishing. He may be disgusted and unable to give the correct concentration to his problem. When he comes into the shop, the manager listens to his story until the contractor has given an indication of the underground conditions at the well and the tools that have been used. It is then the manufacturer's job to select the proper tool from stock or make a special tool for the contractor's use.

Drill presses used in making drilling equipment.

Need for Diplomacy

In most cases the manufacturer will tell the contractor a story of the success of another contractor in a similar situation who had used a certain tool effectively. Most manufacturers realize that an open suggestion concerning the use of a certain tool might offend the contractor, who should know the condition of the well and the proper tool to use in his situation better than anyone. Contractors and drillers take kindly to diplomatic suggestions but they dislike anything that smacks of superior knowledge or dictatorial comment on untried tools. "We can't tell a contractor what to do," said one store manager. "We just tell him what some other contractor did when he was caught in the same fix. In that way we make a friend and often clear the hole as well, winning a new business account in many instances."

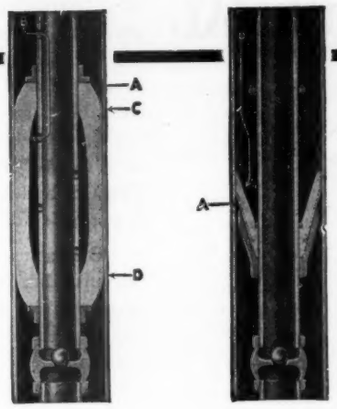
When stock tools prove inadequate for the fishing job, the contractor takes a picture of the underground conditions and brings it to the manufacturer, who then goes about the work of making a special tool. "About half of our work consists of special jobs," was the remark of a machine shop foreman in a large Mid-Continent supply company shop. "In this way we give the men in the production end of the business a real and vital service."

An "Underground Picture"

An impression block is the ordinary means for taking the underground picture of the condition of the tools. In doing this a cylindrical wooden block, the diameter of the bailer, is slotted and fixed on the bottom of the bailer, with the dart in the slot. A bolt is then clamped through the dart and the block is held firmly in place against the bailer. Several nails are then driven in the bottom of the block of wood, allowing the heads to stick out about an inch. A piece of tin is then rolled around the bottom half of the wooden cylinder so that it projects beyond the bottom. This is nailed to the wood and hard soap is poured into the hollow cylinder formed. The heads of the nails keep the soap from falling out during its progress through the hole. The bailer is lowered until it touches the tools or other obstructions which leave an impression in the soap. When the bailer is withdrawn the contractor is shown the condition of the hole and the tools by the impression left on the soap.

The manufacturer is given the impression block and in a short time completes sketches and specifications for the special tool which is considered necessary. The skilled workmen, who are adepths at their trade, follow out the suggestions and the sketches and place the finished tool in the contractor's hands in a few hours. If successful, the contractor in some cases pays for the tool outright, including the designing work, materials

(Continued on Page 116)



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PRODUCTION ESTIMATES

Everybody in the oil business knows that the existing conditions are the consequence of the operations of the law of supply and demand.

They are all watching the weekly fluctuations in production and the monthly reports on consumption to see which is gaining or losing. Their business today and their prospects tomorrow are bound up in that race between demand and supply.

As consumption is now running well ahead of last year in about the rate expected interest centers chiefly in the figures or production which has been the real surprise of the year.

There are but two national estimates on production offered, that published each week in The Oil and Gas Journal and one appearing in the daily papers.

Careful comparison from week to week, extending over a long period, has convinced readers of The Oil and Gas Journal that there is really only one estimate which can be relied upon for current and accurate figures.

This has been emphasized in recent weeks by a wide divergence which has caused a good deal of comment and is now being followed by more definite criticism since the course of the two estimates has proved very completely that The Oil and Gas Journal estimates are at least a week to 10 days ahead.

No other explanation is conceivable when it is observed that a 22,000 barrels increase in one week in The Oil and Gas Journal figures appears as a 24,000 barrels increase the following week in the other estimate while a 14,000 barrels decrease in The Oil and Gas Journal in the same week turns up as a 15,000 barrels decrease in the third week in the other estimate.

Closer examination of the estimate by fields shows just where the discrepancies occur and inquiry cinches the 7 to 10 days' prompter figures in The Oil and Gas Journal. It is, as has been remarked, as great a difference in time as between figures collected by wire and sent by mail.

Oil men everywhere who have come to rely upon The Oil and Gas Journal understand the matter perfectly. They know from personal experience that The Oil and Gas Journal estimates are based upon telegraphic reports from its own staff correspondents in every field. They know, moreover, that these correspondents have been specially trained by years of practice and familiarity with their fields and have been so constantly impressed with accuracy as the first requisite in dealing with statistics transmitted to The Oil and Gas Journal, that the figures used are as correct as it is possible for them to be.

Oil men know, also, that these field reports are handled in The Oil and Gas Journal office by men technically qualified to tabulate them and interpret them. Estimates based upon such knowledge and experience are the most dependable available anywhere in the industry.

The importance of accuracy and promptness in the publication of weekly estimates of production is thoroughly understood by the industry since every other factor is affected by the upward or downward movement of supply. But it is at times like the present when we are on the verge of a restoration of balance in the industry that these figures are of the most vital consequence to every producer, refiner and marketer in the business.

Judgement based upon belated or erroneous estimates may easily prove very costly to men in any branch of an industry so susceptible to lightning-like changes as the oil business.

Production statistics lie at the very foundation of the entire business. Everything else depends upon the cost of the raw material and that in turn, of course, depends upon the relation of supply and demand.

The supply is measured in terms of daily production, available with the completion of the weekly reports. The weekly estimates are, therefore, the true yardstick of the oil industry.

The efforts made to curtail drilling since early in May when it was realized production was going to be much greater than anyone had expected corroborate that. No one imagines that we were in danger of another year of overproduction like 1923 but, in view of the overhanging stocks, too much oil was being produced.

After that realization the weekly estimates were watched eagerly to see the effect of curtailment, to see if production was being checked to a total that would not be perilous.

Now they are being watched as anxiously for signs of a decreasing output which will mark the turning of the tide.

Everything, as we say, depends upon this flow and ebb. The earliest and most accurate figures are sought. A week or 10 days' delay in this knowledge may prove disastrous. Seven to 10 days' advance information may be invaluable.

The Oil and Gas Journal estimates are not only accurate but the earliest by over a week.

FICTION AND FACTS

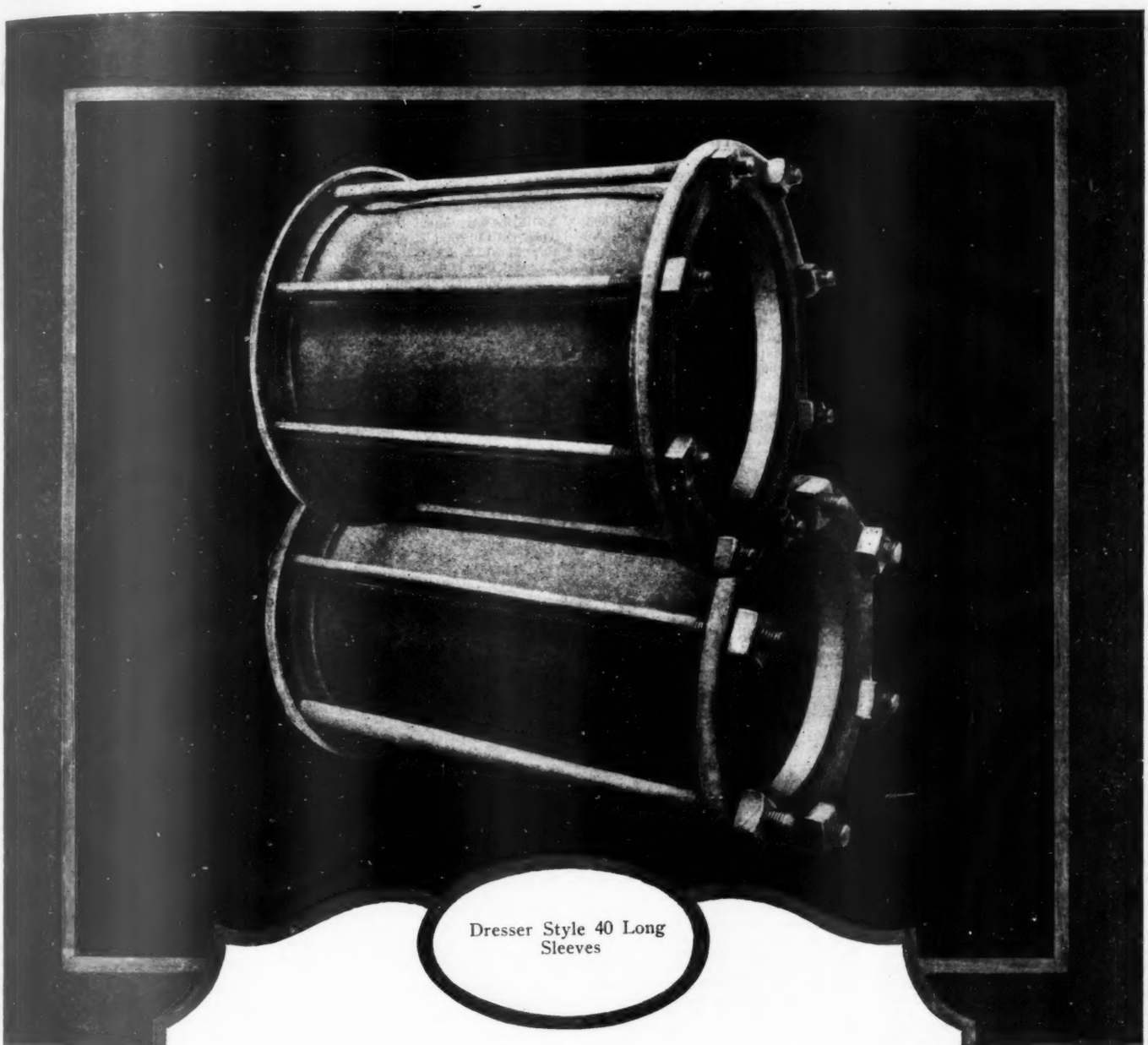
A Michigan subscriber forwards a clipping from the market page of the Detroit Free Press which is of interest as showing what the daily papers print about the oil business. This extract is from an article signed by Benjamin H. Cram and is as follows:

> It might be recalled that few of our oil fields have dried up. The wells in Pennsylvania, the original field, are pumping oil in as great quantities, after 65 years, as they did originally. So also are Ohio's wells and those in every other section of the country. Oklahoma's first well, now 18 years old, is delivering as much oil today as in its first year.

Readers of The Oil and Gas Journal can turn from this assertion to the article by Mr. Bowles in this issue giving the record of the big fields, from which it will be seen that Bradford, for example, reached its peak, 20 years before the automobile, with a total of over 25,000,000 barrels in 1881 which five years later was down to 10,000,000 barrels.

Every oil man knows that the production of the Eastern States has been declining slowly but surely during the past 20 years. They are producing about 40,000,000 barrels a year against 60,000,000 barrels in 1901.

Yet despite this easily ascertained fact assertions such as that sent from Michigan are printed in the daily papers and are accepted by gasoline consumers as another indictment against the oil industry.



Dresser Style 40 Long Sleeves

Dresser Style 40 Steel Long Sleeves are used, for repairing broken screw lines, and also to take care of expansion and contraction on screw or welded lines, by placing at frequent intervals. These Sleeves are designed for Plain or Threaded End Wrought Steel Pipe in all sizes, and are practically the same thing as Style 38 Coupling, except in the length of the Middle Ring and Bolts. They are also used to repair broken or split pipe.

S. R. DRESSER MANUFACTURING CO.
Bradford, Penna., U. S. A.

DRESSER
COUPLINGS DOMINATE

Tulsa Oil Pools Important Producers

Suburban Development Has Made Remarkable Showing With One Well Making 4300 bbls. of Gravity Crude

By C. D. Lockwood

Within a radius of 6 miles of the city limits of Tulsa, the Oil Capital of the World, is a curious mixture of new oil development and wells of historic interest. Here, in Section 8-20-12, is located the first well known to have been drilled to the second break in the Mississippi lime in Osage County, and less than 2½ miles north of it, is one of the latest Wilcox sand sensations, the most remarkable high gravity producer perhaps, that was ever drilled, having started on June 30, with a flow of 4,300 bbls. of oil that tested 50 degrees gravity. Within this sector are three Bartlesville sand wells which were drilled in 1903 and 1904 and which are still producing oil. During the past year two new Wilcox sand pools were discovered just west of town, and another Wilcox Pool less than 2 miles northwest of the Tulsa Country Club was developed into a field that sold for $2,200,000 early in 1924. One lease of this field already has yielded more than 4,000 bbls. an acre.

Yet with all of this development, comparatively little popular attention has been paid to the area within the past year. The old adage about being "too close to the forest to see the trees" may be said to apply in this case as the head offices of land and scouting departments are mostly located in Tulsa and a majority of the oil writers make their headquarters in the Magic City. The proximity of the wells to the city made them much less attractive from a popular standpoint than producers of much less substantial proportions out in the stocks where communication is difficult. The real reason for the apparent indifference of the big companies, however, has been the settled condition of the acreage most of which has been "sewed up" for a long time and prices were high for what little acreage there was available.

Country Club Pool

The Country Club Pool was the first o fthe three new areas near Tulsa to be discovered. In May of 1922, the Munn Brothers completed their No. 1, SE cor. SW NE NE, Section 28-20-12, for 200 bbls., the best pay having been found at 2,092-96 feet. The upper sand at 1,997-2,003 feet contained 7,000,000 feet of gas in this well. In August of the same year, the Munn Brothers drilled in their No. 2, in the same section, and it was good for about same amount of oil as No. 1, making 225 bbls. from sand at 2,032-48 feet. It found a gas sand at 1,590-93 feet which was good for 60,000,000 feet of gas.

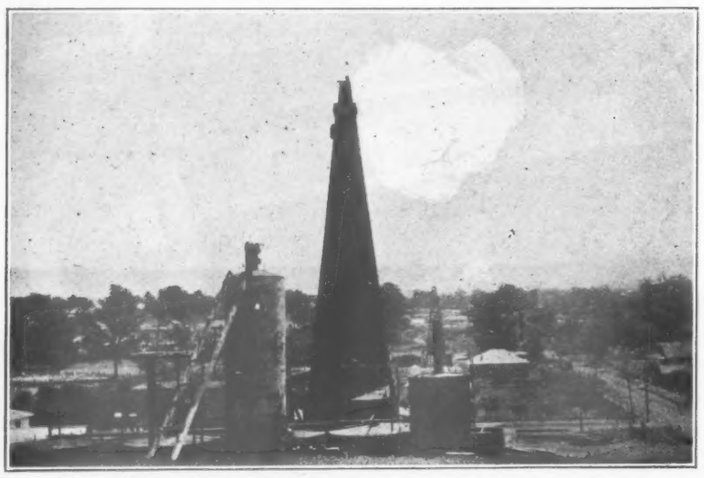
The active development of the pool, however, did not start until October of 1923 when the Munn Brothers finished their No. 3 on the same lease for 600 bbls. in sand at 2,015-30 feet. Late in November, their No. 4 also came in making 850 bbls. from sand at 2,034-40 feet. Shortly after that, the Peer Oil Corp., which had purchased the northwest quarter of Section 28-20-12 from the Riverland Oil Co., brought in its No. 3, good for 512 bbls. in sand at 2,018-56 feet, and just about January 1, completed No. 2 for 1,500 bbls. in the oil pay at 2,046-52 feet. The same company's No. 4, completed on February 4, was also good for 1,400 bbls. in the pay at 2,040-60 feet. The Munn Brothers' No. 5 was the best initial producer in the field. It was completed about January 5 for 2,400 bbls. from oil sand at 2,045-62 feet. Their No. 6 was an 800-bbl. well, No. 7 made 300 bbls. and No. 8 was a duster at 2,330 feet, being on the north line of the lease.

Wells Declined Considerably

After the Mutual Oil Co. purchased practically the entire pool for a total consideration that was said to be $2,200,000 early in March, several wells were completed for fairly good production on the Peer lease but those on the east side were not so good. No. 1 in the NE cor. SW, Section 28-20-12, made 500 bbls. from the second break at 2,060-65 feet ,and No. 5, SE cor. NW, same section, was finished for 1,075 bbls. from oil pay at 2,010-15 feet. About the same time, the Tidal Oil Co. completed its No. 2, in Section 21-20-12, for 520 bbls. in sand at 2,122-26 feet.

The wells have declined to a great extent like all lime production, but the field was still making over 1,000 bbls. daily in the middle of July, about 700 bbls. of which was coming from the former Peer & Riverland lease, which has averaged more than 4,000 bbls. to the acre, on a basis of 10 acres per well.

The Vern and Bruner pools, known as Tulsa's "backyard pools" have produced more oil than many persons imagine.



In the foreground is one of the largest wells in the Bruner Pool, Charles Page's No. 4 Bruner, which came in for 1,600 bbls., and in the background is the discovery well drilled by the Shaffer Oil & Refining Co.

While they have not been record-breakers in anq respect, they are nevertheless excellent Wilcox sand pools. During June, the two pools together averaged 5,519 bbls. daily.

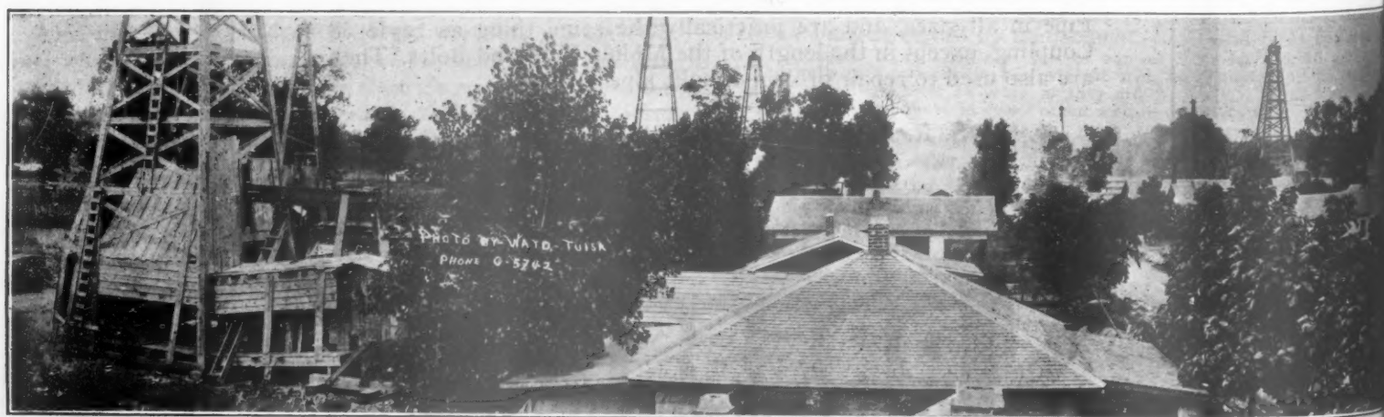
The discovery well in the Bruner Pool, the well that really opened up the area, was completed about the middle of December last year by the Shaffer Oil & Refining Co. and Fitzpatrick. It was good for 460 bbls. from the second pay sand at 2,026-58 feet, after having produced about 12 bbls. an hour from the upper sand at 1,916-21 feet. This well was located in the southwest corner of the northeast quarter of the southeast quarter of Section 6-19-12. It had been previously completed in June of 1923 as a gas well good for 15,000,000 feet of gas in the Burgess sand at 1,580-86 feet, by Charles Page, who retained the gas rights when he sold the lease to the Shaffer Oil & Gas Co. Page completed his No.2 E. Bruner, about a quarter of a mile due west of the Shaffer well, about two or three days before the latter completion but it was a much smaller well, having finished as a 75-bbl. pumper in the sand at 2,137-40 feet. The Shaffer well really started the active development of the pool and after nearly eight months of life is still producing about 65 bbls. of high gravity crude daily.

First Well a Duster

The first well drilled in the Bruner Pool was a duster, having been drilled by Munn Brothers & Fitzpatrick in the southeast quarter of the southwest of Section 5-19-12. This test, known as No. 2 Mary Partridge, was carried to 2,233 feet before it was plugged and abandoned. Careful checking of the geology revealed the fact that it was off structure, and an agreement was reached between the Page and Shaffer interests whereby the test, which turned out to be the discovery well, was drilled.

Among the several large wells in the Bruner Pool, one of the best was Charles Page's No. 4 Jennie Bruner, direct west offset to the discovery well. It came in for 1,600 bbls. of oil from the second pay sand at 2,050-60 feet. The lease on which this well is located turned out to be perhaps the best in the pool, having to its credit several producers with large initial production. The best of these was No. 5, located on the other side of the eighty, which put 1,900 bbls. into the tanks during the first 24 hours. It was brought in about the middle of February this year. In March, No. 6 was completed for 1,000 bbls., and in April No. 7, just one location south of the 1,900-bbl. initial producer, was added to the list, making 920 bbls. initially.

Thompson & Black also brought in some good producers on their lease in the southeast quarter of the southeast of the same section, several of which passed the 1,000-bbl. mark. Their No. 1, direct south offset to the discovery, was good for 60 bbls. an hour from sand at 2,042-52 feet. This was completed early in March. Their No. 2, in the northeast corner of the forty, tanked 1,000 bbls. on April 12 from the lower horizon at 1,998-2,025 feet. No. 4, in the southeast corner, was finished May 24 for 50 bbls. an hour while the wells in the center and in the southwest corner of the forty were small pumpers after shots.



This conglomeration of rigs and machines in the Lawnwood-Trimble subdivision has given to the Tulsa suburb the humorous nicknames of "Burkburnet" steam filled the air and the atmosphere was charged with the feverish excitement of a real oil field. Soon afterward, t

Another excellent well drilled by Thompson & Black was their No. 1 Mary Partridge, on the same 40 acres where the first dry hole was completed. The producer came in late in June for 1,850 bbls., although the north offset drilled in July by the Shaffer Oil & Refining Co. was only a 60-bbl. well.

The Vern Pool

The Vern Pool was opened up in February when the Echo Oil Co.'s No. 1-A Grayson, SE cor. NE, Section 5-19-12, came in for 35 bbls. an hour in sandy lime at 2,034-49 feet. The Shaffer Oil & Refining Co.'s offset, No. 1 Partridge, was completed in April at the rate of 408 bbls. and the Echo's No. 2 made 300 bbls. about the same time, later additions included the Echo Oil Co.'s No. 3 Grayson, which made 475 bbls. from the pay horizon at 2,020-2,106 feet and the Shaffer Oil & Refining Co.'s No. 4 Partridge, which was the best well in the pool, flowing at the rate of 125 bbls. in one hour and tanking 1,500 bbls. in its first 24 hours from sand at 2,052-66½ feet. There is some possibility of this pool being extended to the east a short distance as two tests are drilling on the east side now, and if they find oil they will extend the pool about a quarter of a mile.

During June, Morgan & Hancock sprang a surprise when they extended the Bruner Pool across the road into the town lots of the Trimble subdivision. Their well located in the NW cor. of Section 8-19-12, was good for 600 bbls. initially from sand at 1,964-72 feet, and the oil tested 41 degrees. Caldwell & Sons then came along with a 400-bbl. producer in the SW cor. NW NW NW, same section, and a feverish drilling campaign resulted, and is still in progress. The Choctaw Oil & Gas Co. completed one good for 80 bbls.; G. N. Wright and others found one good for 120 bbls.; Caldwell & Sons finished their second well for 150 bbls.; Hughes & Worley could get only 20 bbls. out of their No. 1 following a 10-quart shot, and Henry & Avery had a 20-bbl. well in their No. 1. More than 20 other wells were drilling in a space that should be occupied by no more than two rigs, and discouragement was offered to several when Colvin & Belt plugged their test in the CEL NW NW NW, as a failure at 2,030 feet.

Morgan & Hancock sold $18,000 worth of oil from their first well in the first 20 days, but others are not doing so well.

The Barnsdall Oil Co.'s No. 16, in Section 32-21-12, which flowed 4,300 bbls. daily on June 30, made 992 bbls. on July 30 when it was exactly a month old. Including the production for that date, its total output amounted to 36,965 bbls. of 50 gravity crude, or a daily average of 1,192.22 bbls.

It is interesting to imagine what the results would have been had the same company drilled on this location back in 1914 instead of 2½ miles south where they carried a test to the second break at that early date, and found a production of 13 bbls. an hour. Several men with vision urged others to drill for the second break production in Osage County at that time, and had a 200-bbl. an hour well been discovered, the history of the industry would have been altered.

NOTE—A chart showing development work in the area around Tulsa is published on page 40 of this issue.

KENTUCKY PRODUCTION

By T. S. Scott

Secretary Kentucky Oil Men's Ass'n.

Production of crude petroleum in Kentucky during June was as follows:

County—	Production
Allen	34,400.97
Barren	9,760.93
Bath	965.02
Boyd	140.96
Cumberland	3,822.90
Elliott	439.06
Estill	42,802.17
Floyd	1,993.98
Hancock	2,976.54
Hopkins	1,222.22
Johnson	102,396.62
Knott	617.93
Lawrence	40,397.63
Lee	191,223.16
Magoffin	88,696.91
McCreary	406.09
Menifee	65.87
Monroe	1,832.69
Morgan	819.73
Ohio	7,041.18
Owsley	1,171.86
Powell	21,223.76
Russell	437.11
Simpson	1,341.51
Warren	47,664.85
Wayne	11,215.46
Wolfe	4,215.40

CHANGED THEIR BASE

HOUSTON, Tex., Aug. 4.—Postoffice officials say oil promoters are now operation from Mexico, sending their lurid literature with its glowing promises through the Mexican mails into the United States. Guadalajara is said to be the headquarters of many of these stock dealers, some of whom are alleged to be fugitives from justice on this side of the Rio Grande. The State Department has asked Mexican authorities for their apprehension and extradition.

STATISTICS OF CRUDE PETROLEUM FOR JUNE, 1924

(Preliminary data, subject to revision, based on reports received up to July 29, issued by the Department of the Interior, through the Geological Survey.)

During June daily average production of crude petroleum in the United States (1,981,300 bbls.) decreased 7,506 bbls. as contrasted with that for May, according to the Geological Survey; daily average imports (222,000 bbls.) decreased 16,484 bbls.; daily average exports (51,400 bbls.) decreased 5,890 bbls.; and daily average indicated deliveries to domestic consumers (2,003,000 bbls.) decreased 11,419 bbls. As a result of the month's operations, pipe line and tankfarm stocks increased 4,467,000 bbls.

During the first half of the current year 352,163,000 bbls. of petroleum was transported from producing properties in the United States, as contrasted with a production of 342,306,000 bbls. during the first half of 1923. If production continues at approximately the present rate, the total output for the year will not be far from 700,000,000 bbls., or somewhat less than the ooutput of last year. Imports increased 2,500,000 bbls. in the first half of the year, as contrasted with the similar period of 1923, and indicated deliveries to domestic consumers, amounting to about 369,000,000 bbls., increased almost 32,000,000 bbls. Pipe line and tank farm stocks, amounting to 351,000,000 bbls. on June 30, 1924, have increased 61,000,000 bbls. since June 30, 1923.

PRODUCTION

The figures given below for 1924 for the States east of California, compiled from reports made to the Geological Survey by companies that operate gathering lines, are preliminary and show the quantity of petroleum transported from producing properties. Petroleum consumed on the leases and produced but not transported from the producing properties, ranging for the past few years between four and nine million barrels annually, is not included in the preliminary figures. These items are given in the final statistics, which show all the oil brought to the surface. Current figures for California are those reported by the Pacific Coast office of the American Petroleum Institute. Final figures for California are compiled by the California State Mining Bureau. Data for 1923 are final and include oil consumed on the leases and net increase of producers' stocks.

BY STATES

(Barrels of 42 U. S. Gallons)

	May, 1924*		June, 1924		Jan.-June	Jan.-June
	Total	Daily Av.	Total	Daily Av.	1924	1923
Arkansas	4,445,000	143,387	4,143,000	138,100	21,624,000	18,200,000
California	19,834,000	639,793	18,808,000	626,933	118,109,000	116,681,000
Colorado	7,000	226	9,100	303	43,300	41,200
Illinois	712,000	22,968	690,000	23,000	4,032,000	4,408,000
Indiana:						
Southwestern	62,000	2,000	58,000	1,933	340,000	407,000
Northeastern	26,000	839	26,000	867	143,000	114,000
Total Indiana	88,000	2,839	84,000	2,800	483,000	521,000
Kansas	2,500,000	80,645	2,408,000	80,267	13,718,000	15,255,000
Kentucky	650,700	20,990	611,400	20,380	3,719,600	4,097,700
Louisiana:						
Gulf Coast	185,000	5,968	193,000	6,433	1,078,000	1,229,000

(Continued on Page 108)

GEOLOGICAL SURVEY'S REPORT ON CRUDE OIL RUNS, DELIVERIES AND STOCKS AND CRUDE OIL IMPORTS AND EXPORTS, FOR THE FIRST SIX MONTHS OF 1924

(Subject to Revision)

The Geological Survey announces that in the first half of the present year 352,163,000 bbls. of crude petroleum was removed from leases in the fields of the United States. The highest daily average occurred in May, 1,988,806 bbls., and the lowest in January 1,821,129 bbls.

In the same six months the crude imports, including topped crude, came to 42,755,000 bbls., making the production and imports 394,918,000 bbls. The indicated deliveries to domestic consumers were 368,909,000 bbls, and the total exports of crude 9,565,000 bbls., making the deliveries and exports 378,474,000 bbls. The production and imports exceeded the deliveries and exports in the six-month period by 16,444,000 bbls., which increased the pipe line and tank farm stocks held at the end of June to 351,218,000 bbls.

The most recent report on crude stocks held by refiners was as of May 31, when they were 35,037,364 bbls. of domestic crude and 5,368,548 bbls. of foreign crude, or 40,405,912 bbls. in all.

The report shows deliveries to consumers in June to have averaged lower than in any previous month this year, leading to the belief that refiners were drawing on their own stocks during the month and curtailing crude purchases, which led to an increase in pipe line and tank farm stocks in June of 4,476,000 bbls., as compared with the stocks at the end of May.

Following is the report:

CRUDE PETROLEUM—MONTHLY SUMMARY, JANUARY-JUNE, 1924, SUBJECT TO REVISION

	Production (Petrol'm transp. from producing properties)		Imports (Including topped oil)		Exports		Stocks*			Indicated Deliv'rs to Dom. Consumers		Number of Producing Oil Wells Completed During Month‡
	(Thousands of Bbls.)	Dy. Av. (Bbls.)	(Thousands of Bbls.)	Dy. Av. (Bbls.)	Total (Thsnds. of Bbls.)	Dy. Av. (Bbls.)	Last Day of Month (Thsnds. of Bbls.)	Number of Days' Supply†		Total (Thsnds. of Bbls.)	Dy. Av. (Bbls.)	
January	56,455	1,821,129	6,303	203,322	1,528	49,290	333,742	162		62,262	2,008,451	774
February	55,454	1,912,207	6,511	224,517	1,687	58,172	334,892	160		59,128	2,038,897	904
March	59,729	1,926,742	8,591	277,129	1,484	47,871	338,531	162		63,197	2,038,613	1,088
April	59,433	1,981,100	7,297	243,233	1,548	51,600	341,928	162		61,785	2,059,500	1,429
May	61,653	1,988,806	7,393	238,484	1,776	57,290	346,751	167		62,447	2,014,419	1,657
June	59,439	1,981,300	6,660	222,000	1,542	51,400	351,218	171		60,090	2,003,000	1,501

*Net pipe line and tank farm stocks of domestic crude oil east of California; producers' pipe line and tank farm stocks (but not refinery stocks) of crude oil, residuum, and tops in California and stocks of imported crude and topped oil topped in Mexico held in the United States by importers elsewhere than at refineries. †Based on average daily rate for month of deliveries to domestic consumers and exports. ‡For States east of California, from The Oil and Gas Journal; for California, from the American Petroleum Institute.

—Photo by Ward, Commercial, Tulsa.

ng Beach." The picture doesn't convey any idea of the activity that prevailed on this 10 acres when most of the drilling wells first started up. Smoke and mpened the ardor to some extent and practically all of the wells shown here were doomed to be small producers or failures.

29 Years Old!

Close view, showing excellent condition of a "NATIONAL" Pipe Gas Line that is giving satisfaction after 29 years of underground service

Another Typical Example of

"NATIONAL" PIPE DURABILITY

THIS 16-inch "NATIONAL" gas main was laid in 1895 in a 45-mile line extending into West Virginia from Southwestern Pennsylvania. For the first 18 years of its service the line carried 150 to 250 pounds pressure. It was found that the joints used were not well adapted to the service of hilly country, and it became necessary to remove the pipe to repair and renew the joints, which gave an opportunity to observe the durable qualities of the pipe.

¶ The pipe itself, unprotected by coating of any kind, was found to be scarcely affected at any point by corrosion. Every length, with new joints, was relaid in the same ditch. Today, after conducting gas for 29 years, the owning company reports it to be in good condition. Undoubtedly it will continue giving satisfactory service for many more years.

¶ The facts in this instance are significant to all users of wrought pipe in the Oil and Gas Industry; they illustrate the typical durability of countless other "NATIONAL" installations.

NATIONAL TUBE COMPANY

DISTRICT SALES OFFICES:

Atlanta, Boston, Chicago, Denver, Detroit, New Orleans, New York, Salt Lake City, Pittsburgh, Philadelphia, St. Louis, St. Paul

d But Still Young

The test of service—truest of all tests—proves that "NATIONAL" Pipe is a particularly durable pipe

WITH or without protective coatings, the uniform physical quality of "NATIONAL" Pipe, in itself, offers considerable resistance to corrosive influences. The smaller sizes (4-in. and under) with thinner walls are mechanically roll-knobbled (Spellerized) to further reduce any tendency to corrosion. As a result, "NATIONAL" Pipe is durable under many abnormal as well as normal conditions of service.

A number of practical advantages, including continuous uniformity, great strength and unique ductility; sound welds; clean-cut, strong threads; lengths up to and including 40-ft., and diameters from ⅛-inch to 96 inches; numerous types of joints for specific purposes; and a practically complete line, have made "NATIONAL"

THE RECOGNIZED STANDARD OF WROUGHT PIPE

Ask for "NATIONAL" Bulletins Nos. 1 and 15
Characteristics and Advantages of "NATIONAL" Pipe and "NATIONAL" Pipe for Drilling Purposes.

LOOK FOR
NATIONAL
THE NAME

Another view of this 45-mile "NATIONAL" Gas Line—first laid in 1895

(General Sales Offices FRICK BUILDING) **PITTSBURGH, PA.**

PACIFIC COAST REPRESENTATIVES: U. S. Steel Products Co., San Francisco, Los Angeles, Portland, Seattle. EXPORT REPRESENTATIVES: U. S. Steel Products Co., New York City

Anglo-American Oil Effective Competitor In British Markets

Reports from London indicate that the Anglo-American Oil Co., Ltd., a former Standard Oil subsidiary, is able to compete effectively in the British market. Figures from a trade source indicate that the Shell group last year controlled 37.4 per cent (136,029,863 gallons), Anglo-Persian 24 per cent (88,694,556 gallons), while Anglo-American controlled 26.3 per cent (96,764,780 gallons) of the British domestic gasoline business.

These figures understate the percentage of business to Anglo-American although quantitatively they are correct for Shell, and possibly so for Anglo-Persian. They were arrived at by taking imports of the different companies in gasoline and deducting re-exports. Re-exports, for which precise figures were not known, were prorated on the basis of imports, a method which cannot be applied to Anglo-American because it does not do any re-exporting.

Has Several Advantages

Anglo-American is favored as regards supplies and has an advantage in the products it markets as all are obtained from the same source in America and are of a uniform quality. Further, Anglo-American is not burdened with expense of refining in England beyond what is done in a small way for special grades of gasoline for cleaning and other purposes.

The Anglo-American has a large number of ocean receiving installations, among the most important being those at Avonmouth, Ellesmere Port on the Manchester Ship Canal, Barrow in Furness, London and Hull. With the facilities now afforded by the large installations of Salt End, Hull, ocean tankers of 17,000 tons capacity can load in New York and deliver direct into tanks at Hull when formerly only vessels of a much smaller capacity were able to do so.

The cost of carrying oil direct from New York to Hull is little if any more, than the cost of shipping oil by 1,000-ton barges from the East Coast or from 'Swansea where the Anglo-Persian refinery is located. Further the Swansea refinery being 7 miles inland necessitates pumpnig the crude oil from the port to the tank farm at Skewan, and after refining, pumping the finished products back again for loading on barges and tanks for coastwise shipment.

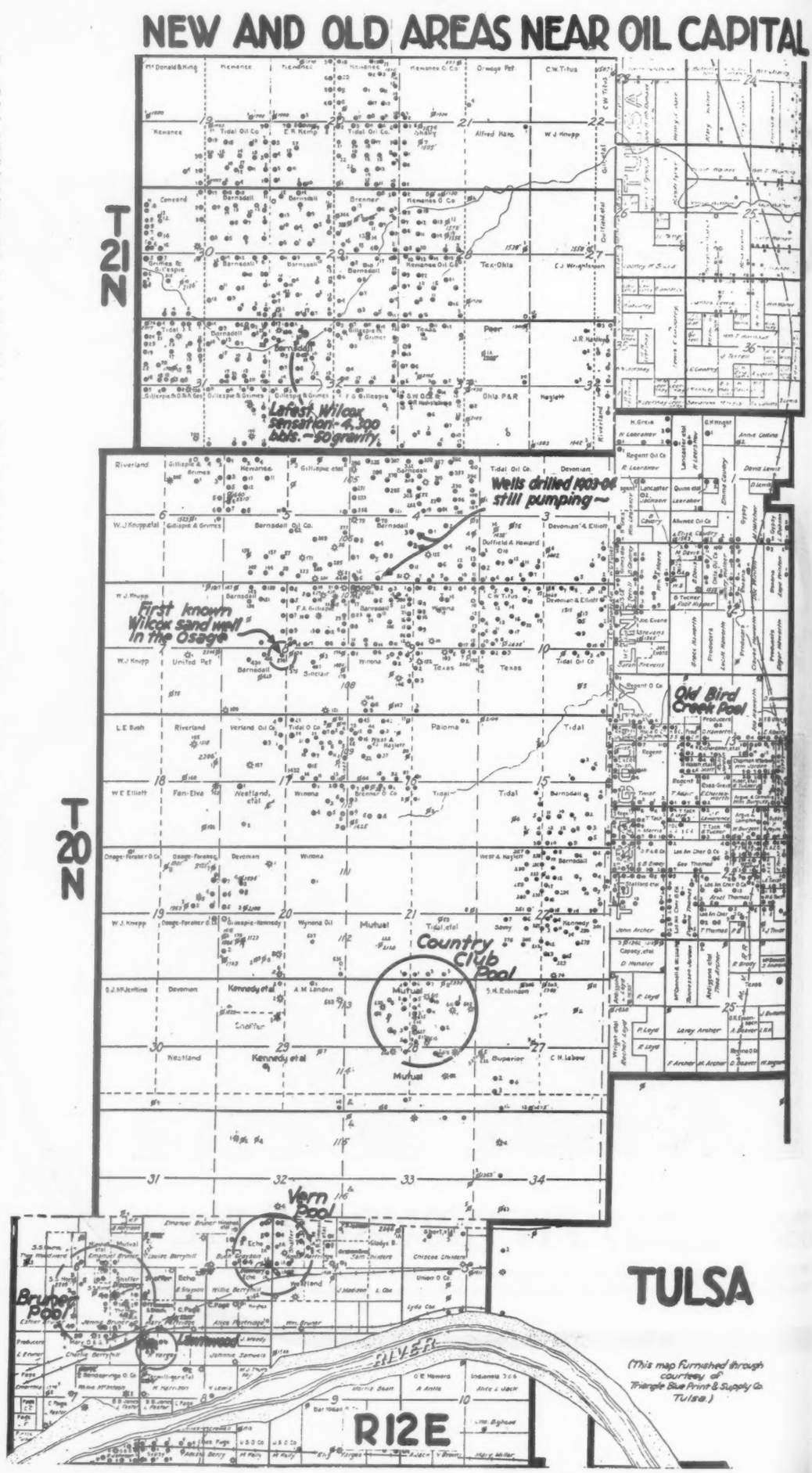
It is said that the location of the Anglo-Persian refineries at Skewan was due to the British Government's insistence that so important an industry should be well out of reach of attack from the sea, but of course this location does not render it free from attack from the air. The refinery is now fixed and cannot be altered but it is evident the extra handling necessitated by such a location cannot but increase the company's costs.

Those companies competing with the larger distributing companies which have not their own tank steamer fleet are forced to charter on the outside market. This at times is very expensive, the rates recently being as high as 45s a ton from Gulf ports in the United States to the United Kingdom ports, although at present they are somewhat lower than this, recent quotations being at about 35s a ton. This is much above the actual cost of operating a tank steamer fleet such as that of Anglo-American. This difference would seem to confirm the saying common in English oil circles that companies owning their own transport can continue to pay dividends on their transport alone without any profits from marketing.

In studying import figures for the United Kingdom it is noticeable that while the Anglo-American draws its oil from the United States and the Anglo-Persian practically all from Persia, that the Shell Co. imports are registered as coming from at least 10 countries. Such a variety of sources of supply, must at times make it difficult to maintain uniformity of products.

The use of the road-side pump is rap-

(Continued on Page 106)



Heat and Power Research in Petroleum

U. S. Bureau of Standards Division Engaged in Important Investigations of Great Value to the Oil Industry

By Dr. H. C. Dickinson
Chief Heat and Power Division, U. S. Bureau of Standards

Of the 10 scientific divisions of the Bureau of Standards the one dealing most directly with problems affecting the petroleum industry is, perhaps, the division of heat and power. For instance, this division is charged with the duty of maintaining the standard scale of temperperature measuring instruments used in standards by which are calibrated the thermometers, pyrometers and other temperature measuring instruments usd in refineries and in the laboratories of the oil industry. In addition to this we certify thousands of individual thermometers for different companies.

It is necessary also to know the heating values in Btu. per pound or gallon of all kinds of petroleum products from

Dr. H. C. Dickinson, Chief, Division of Heat and Power, Bureau of Standards

fuel oil to gasoline. The types of calorimeter used for ascertaining these values have all been studied and the results published by the Bureau of Standards. Uniformity in these calorimeter measurements in different laboratories throughout the country is maintained by means of standard combustion samples which are supplied to calibrate instruments in the laboratories in which they are used. Some types of instruments are sent in to the Bureau of Standards for test and certified.

An equally important instrument, from the point of view of the petroleum industry, is the viscosimeter. Accurate measurements of viscosity are demanded by the refiners and vendors of lubricating oils. Strange to say, the purchasers are less interested in these measurements. The standardization of all types of viscosimeter is one of the problems of the bureau, and, we have to admit, one of the most knotty ones. Uniformity of results is much more important here than absolute accuracy. It is comparatively easy to get uniform results in any one laboratory, but to produce these results in other laboratories is much more difficult, and the lot of the standardizing laboratory is not a happy one. However, we believe the problem is now solved and that the viscosimeter tubes certified by the bureau now assure all the uniformity and accuracy that the standard methods of test are capable of affording.

Standardization Saves Oil

When America entered the war British and French experts visited this country and told us some of the important tasks which should be attacked immediately. The Bureau of Standards was asked to determine exactly what an aircraft engine does when subjected to such conditions as were encountered by the members of the recent expedition to Mount Everest, where a breath of air contains only one-third of the oxygen we are accustomed to. The engine is no better off than the mountaineer, in fact worse off, because the man can increase the rate of breathing and the amount of air he takes in at each breath, but the engine ordinarily cannot do this. For this purpose the bureau immediately designed and built the first "altitude laboratory," which included a concrete room large enough to contain an aircraft engine and all its operating accessories, besides a few thousand feet of refrigerating coils for keeping the air and the engine cold. As the air in the room must be reduced to a pressure of one-third that of the outside air, the walls and doors of this room had to withstand a pressure of nearly a ton to the square foot, or ten times that for which the ordinary office floor is designed.

The experts from abroad who recommended this undertaking and those at the bureau who designed and built the laboratory did not have the needs of the petroleum industry in mind when they planned it, nevertheless, almost the first job for which we used it had to do with engine fuels. The French had had the most experience in flying and their representatives maintained that gasoline for airplane engines should have an endpoint around 250 degrees F., or engines would not develop anything like their full power. The Bureau of Standards could not accept this conclusion without better evidence than the foreign advisers could show. There were good technical reasons for doubting it. Many weeks of intensive tests, running engines at all "altitudes," often working 24 hours without a rest, yielded a mass of data proving that 250 degree endpoint gasoline is not by any means the best for aircraft. With this definite information to work on, it was found possible to draw up the specifications for aviation gasolines used during the war both by our fliers and those of our allies. And besides being safer and developing more power, the specification gasoline saved the country many millions of gallons of good motor gasoline which otherwise would have been skimmed to meet the ill-advised demand for gasoline of far too high volatility.

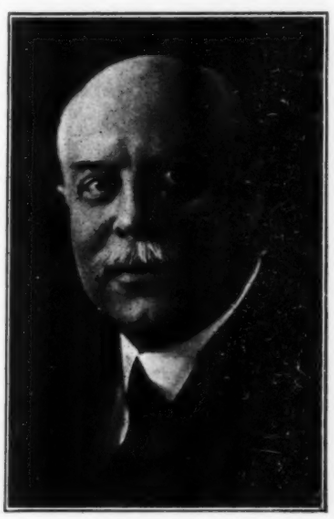
Soap Bubbles

It may seem like a far cry from fuels to soap bubbles. Automobiles as well as aircraft engines sometimes knock. To be sure, there are various kinds of knock but probably the worst variety is the one that has been traced to the fuel. The "why" of fuel knock is not even yet well understood, though many able engineers and scientists have devoted years of work to the subject. It is known, however ,that fuel knock is related to the rate at which the explosion in the engine cylinder progresses. (This rate depends upon the size and shape of the cylinder head, the temperature and pressure of the gas and the amount as well as the quality of the fuel used. When the charge is fired in an engine cylinder it does not all burn instantly but the flame travels away from the spark point at a speed which increases the further it goes because the gas already burned heats and compresses the remainder. This and other equally uncertain factors make measurement of flame speed under these conditions difficult and of little use. Therefore a soap bubble was substituted for the engine cylinder. Here the gas charge blown into the soap bubble is ignited by a spark at the center. There is no cylinder wall to interfere with the explosion and the entire performance can be seen, photographed and measured. Hundreds of such photographs have added to our knowledge of the "how" of gas explosions and the "why" of fuel knock.

Good Gasoline

There was a time when the producers and users of motor fuel were at odds on the question, what is good gasoline. Automotive engineers contended that the heavy ends of some of the gasoline marketed did not burn and might as well be left out. Petroleum engineers claimed that the gasoline was good because people used it. Finally, about three years ago the two industries, acting jointly through the research departments of the American Petroleum Institute and the Society of Automotive Engineers, asked the Bureau of Standards to find some of the facts in the matter. This we have done. Automobiles of the several most widely used models were fitted with instruments for recording fuel consumption, power, temperature and pressures, in fact all the important quantities that are related to fuel consumption. One of these laboratory cars, shown in the accompanying illustration, all bristling with recording devices and test tubes was driven from Washington to White Sulphur Springs, W. Va., where the Society of Automotive Engineers was holding a convention, and narrowly escaped destruction at the hands of the suspicious pleasantry of the West Virginia Mountains. The reader will agree that they had reason to suspect that the occupants of the cars were in league with the mountaineers' natural enemy, Mr. Volstead.

The results of the research show that even the heavy ends of the heavier fuels



Dr. George F. Burgess, Director Bureau of Standards

do burn and the heavier fuels give about the same number of miles per gallon in average service as the lighter ones, but they have other disadvantages noted below.

Starting and Dilution

The main reasons why motorists will not accept heavier fuels than at present are, increased dilution of the crank case oil, requiring more frequent changes of oil, and greater difficulty in starting the car in cold weather. The bureau is now studying these two subjects. If engine cylinders were always hot there would be less trouble with crank case dilution. Unfortunately this is not the case. Engines must be started in cold weather and water jackets require much heat before they are brought to the proper temperature. Cold fuel spray on cold cylinder walls dilutes the lubricating oil. Just when and how this occurs and what are the conditions which affect it favorably or unfavorably, are not yet known. The results of work now in progress, however, are beginning to throw much light upon this subject.

Lubrication

Practically every piece of moving machinery runs on oil. Were it not for this the entire industrial system of the world would be impossible. Yet lubricating oils are commonly sold on the basis of tests which have little direct bearing on the real value of the oil as a lubricant. Laboratory tests and service results have never been brought into harmony. It is one of the major problems

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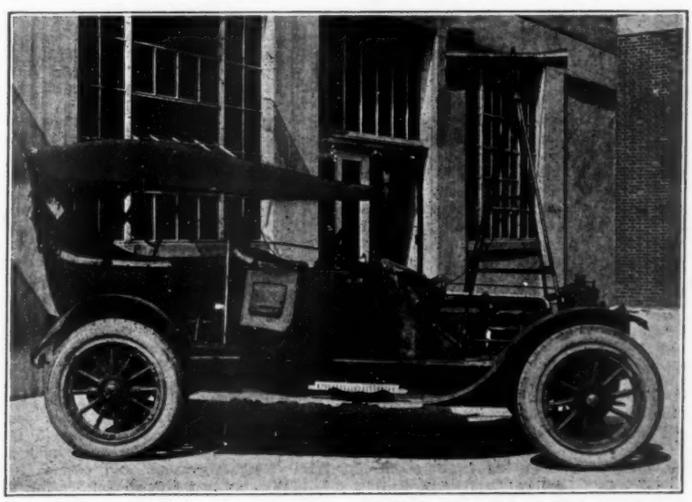


Bureau of Standards test car for the study of car performance and the effect of different grades of fuel.

North-Central Texas Field

By Dan F. Dugan

Critten and others' No. 5 Cobb, Stephens County, makes 1,035 bbls. Magnolia's No. 2 Gardner, deepened, makes 850 bbls. Decrease in Archer County completions. Waite Phillips Co.'s semi-wildcat, Horrtis survey, makes 90 bbls. Big Lake Co.'s No. 11 University, Reagan County, makes 3,000 bbls.

FORT WORTH, Tex., August 2.—The largest producing oil well drilled in West Texas to date, was completed in the Reagan County Pool, by the Big Lake Oil Co. of Pittsburgh, Pa., whose new producer, No. 11 University, is approximately 100 miles southwest of Mitchell County, the nearest producing territory. Drilling at 2,956 feet, the cap rock was penetrated and the well started to flow at the rate of around 400 bbls. a day. Drilling was continued 15 feet in the pay formation and at that depth, the well is flowing at the rate of at least 3,000 bbls. a day. The gravity is 36.6, temperature 56, with no trace of water. The new producer is the northeast test in the field, about one-half mile northeast of No. 10, which is producing around 1,500 bbls. a day. The total production of the field is in excess of 6,000 bbls. a day. Storage is inadequate to handle the present production. The Big Lake Oil Co. has several 55,000-bbl. steel storage tanks under construction, a part of the oil is being moved daily by tank cars to refineries at El Paso and Fort Worth.

It is reported from Pampa, Gray County, Texas, that the Wilcox Oil & Gas Co.'s No. 1 Combs & Worley in the southeast corner of Section 62, was opened up to relieve the pressure after being closed in for over two weeks and the well flowed 35 bbls. in 20 minutes, when the well was again shut in waiting for storage, this test shows all indications of making the largest producer so far drilled in the Northeast Texas fields.

After the drilling of several dry holes during the past four years in Baylor County, it appears at last a commercial producing oil well has been found. At 1,430 feet, the Cranfill Brothers' No. 2 Mills is swabbing around 75 bbls. a day, with but little water. The new producer is just west of the Archer-Baylor County line and west and north of the Swastika Pool in Archer County.

Reflecting the decrease in field work, production in the North Central Texas field continued its downward trend with a reported loss this past week of 974 bbls. daily compared with the previous week. Gains were made in the Burkburnett Pool of 295 bbls., Stephens County 1,290, Eastland County 200 bbls. daily. Losses were reported from Electra, 785 bbls. daily, Iowa Park 1,354, and the wildcat pools 440 bbls. daily, with a total production for the entire field of 122,615 bbls. against 123,409 bbls. for the preceding week.

There was a decided slump in the number of completions reported. In the south section a total of 22 tests was finished, of which 11 were oil producers, 10 dry and one gas well. Two fairly good initial producers were brought in, the largest was the Critten and others' No. 5 Cobb in Stephens County which is flowing around 1,035 bbls. daily at 3,300 feet. The next in production was the Magnolia Petroleum Co.'s No. 2 Gardner which has been a producer for a length of time from the gray lime around 3,200 feet. When its production ceased to pay at that depth it was drilled to the deep pay and at 3,940 feet it is showing initial around 850 bbls. daily. The north fields completed 32 tests, of that number 17 were oil producers and 15 were disappointments. This is a considerable loss in number of completions compared with previous weeks. Archer County made the big decrease, only 12 were completed in that territory, of that number 7 produced oil and 5 were dry holes. Total completions for the entire field numbered 54, made up 28 oil producers, 25 dry holes and one gas well.

Archer County Semi-Wildcat

The Waite Phillips' No. 1 Wilson, a semi-wildcat in the northeast quarter of the William Horrits survey, is flowing 90 bbls. a day after the plug had been drilled out. No water was in evidence. The nearest production is the Texhoma Oil & Refining Co.'s one small well on the Lyle tract 2 miles north, but there is no production of consequence closer than the Sunshine State Oil & Refining Co.'s pool, 3½ miles north. The Waite Phillips Co. owns most of the acreage in the immediate vicinity before the well came in. The Wichita Pipe Line Co. has started laying a 2-inch line to the district.

The Superior Oil Corp. has finally abandoned and plugged No. 1 Kinder, Block 58, Clark & Plumb subdivision, east of Archer City, after getting favorable indications at two shallow depths.

In Throckmorton County, a showing of gas was encountered at 1,165 feet in the test of Larkin & Shaw's, No. 1 Conger, Section 943, 12 miles southeast of the county seat. The gas was cased off, and the test is now drilling around 1,400 feet. Wichita Falls operators may drill a cable tool test on the Steel land, near Spring Creek.

The Strawn Coal Co.'s No. 1 fee, Palo Pinto County, continues to flow every six hours at a depth of 3,044 feet, making 25 to 30 bbls. each flow. The sand was drilled only 1 foot when a small gas showing was found and drilling was discontinued to move back the boiler. The United Pipe Line Co. is laying a line to the well.

Cross Cut Busy

Strawn Coal Co. land near mine No. 2, about two miles northeast of Strawn.

In Brown County the Calbro Oil Co. semicompleted No. 1 Prather for a 65-bbl. producer. With five additional wells nearing the pay in various parts of this field and four new locations just made the Cross Cut section is holding a lead in development.

The largest producer completed during the week was the Texhoma Oil & Refining Co.'s No. 7 Burnett for 215 bbls. at 1,580 feet. Another fair producer was the Underwood Drilling Co.'s No. 5 Maer in the south section of the county for 200 bbls. at 1,565 feet.

Rubsam & Hunter's No. 2 McClure in the Sunshine Hill district was placed on the pump, and is making 35 bbls. a day. The sand was found at 560 feet, a new producing level for that territory.

Drilling in the American Refining Co.'s No. 1 Burnett, a 300-foot southwest offset to The Texas Co.'s flowing well, continues with 1,500 feet of fluid standing in the hole, said to be the most promising showing from the first pay encountered to date in the Panhandle Field. A number of other wells in the north Carson proven district are nearing the pay depth. The Danciger Oil Co.'s No. 1 Burnett, on the line of Carson and Hutchinson Counties and 1 mile north of The Texas Co.'s flowing well, is drilling with rotary tools at 1,942 feet, after encountering the big lime at 1,911 feet.

The Thelma Wells and others' No. 1 Wharton in Wilbarger County is showing estimated 150 bbls. a day. This new producer is about 9 miles south of Vernon in the South Vernon Field, about a quarter of a mile from the South Vernon Oil Co.'s producing leases on the W. H. Stephens farm.

Stephens County

Completions: Critten & Co.'s No. 5 Todd, 1,035 bbls. at 3,300 feet; Glasscock and others' No. 1 Cunningham, dry at 1,430 feet; Snowden & McSweeney's No. 11 Jones. 100 bbls. at 3,185 feet.

Drilling: Brown & Co.'s No. Hudspeth is drilling in black lime and showing a little oil at 3,175 feet; Critten and others' No. 6 Todd, drilling at 810 feet; No. 2 Cunningham, drilling in lime at 3,180 feet; No. 3 Cunningham, showing 200 bbls. daily production and drilling in gray lime at 3,265 feet; Ivan Petroleum Co.'s No. 2 Martin, drilling in hard black rock at 3,700 feet; Marchbanks and others' No. 1 Hudspeth, showing 75 bbls. a day production and drilling in gray lime at 3,285 feet; Mid-Kansas Oil & Gas Co.'s No. 14 Hill, drilling at 2,600 feet; No. 5 Hill, drilling in lime at 3,100 feet; No. 2 Lowe, underreaming casing at 2,895 feet; No. 3 Lowe, underreaming 12½-inch casing at 950 feet; No. 4 Lowe, drilling in shale at 2,050 feet; No. 3 Richardson, drilling by casing at 3,185 feet; Prairie Oil & Gas Co.'s No. 15 Atkins, trying to shut off water at 3,265 feet; No. 1 Caldwell, running 10-inch casing at 2,050 feet; Rochelle and others' No. 2-A Sweeney, fishing for casing at 1,400 feet; No. 3-A Sweeney, drilling in soft rock at 2,150 feet; The Texas Co.'s No. 20 Black Brothers, drilling at 3,380 feet with no show of oil; Texas Pacific Coal & Oil Co.'s No. 5 Rogers, drilling in hard rock at 4,170 feet; Christie Brothers' No. 1 Gardenshire, drilling at 910 feet; Ice and others' No. 1 McCleskey, running 10-inch casing at 695 feet; Little and others' No. 2 Drake, drilling by casing at 3,650 feet; Magnolia Petroleum Co.'s No. 9 Brown, sidereaming 6-inch casing at 3,120 feet; No. 2 Brown, drilling in black lime at 3,796 feet; No. 5 Brown, pulling 5-inch casing at 3,820 feet; No. 6 Brown, drilling by tools at 3,215 feet; No. 1 Gardner, hole full of water and plugging to abandon at 4,515 feet; No. 1 Taylor, drilling at 1,515 feet; Pitzer and others' No. 1 Stoker, showing a little gas and drilling at 3,980 feet; Prairie Oil & Gas Co.'s No. 1 Stoker, drilling in lime at 3,877 feet; Republic Production Co.'s No. 4 Jones, drilling at 1,725 feet; Seaboard Oil & Gas Co.'s No. 1 McCleskey, drilling at 2,475 feet; Sinclair Oil & Gas Co.'s No. 9 Henderson, trying to plug off water at 3,910 feet; Snowden & McSweeney's No. 1 Jones, drilling in black rock at 3,820 feet; States Oil Corp.'s No. 1 Sipes, showing 40,000,000 feet of gas and drilling at 3,565 feet; No. 1 Williamson, showing 500,000 feet of gas and drilling at 3,705 feet; Sun Oil Co.'s No. 11-A Rosenquest, drilling at 1,010 feet; The Texas Co.'s No. 8 Heathley, drilling at 2,820 feet; No. 40-A Parks, drilling in black lime at 3,340 feet; Texas Pacific Coal & Oil Co.'s No. 1 Hand, fishing for casing at 2,130 feet; Thompson and others' No. 1-B Winston, running 6-inch casing at 1,795 feet; No. 4 Williams, running 6-inch casing at 980 feet; Triplehorn Petroleum Association's No. 1 Adams, drilling in brown shale at 625 feet.

Eastland County

Completions: Andrade and others' No. 1-A Gilbert, dry at 500 feet; Kirk & Brewer's No. 1 Young, 20 bbls. at 3,000 feet; Magnolia Petroleum Co.'s No. 18 Westmoreland, 10 bbls. at 2,890 feet; States Oil Corp.'s No. 3 Quiett, an old well, drilled deeper from 1,894 feet, 200 bbls. at 3,590 feet.

Drilling: Arkansas Fuel Co.'s No. 3 Lyerla, is spudding; Brothers Oil Co.'s No. 1 Watson, drilling in shale at 1,500 feet; Buffington and others' No. 1 Foster, drilling at 900 feet; Barkley and others' No. 5 Wright, cleaning out with no show of oil at 3,730 feet; Dixie Oil Co.'s No. 1 Waggoner, showing 20 bbls. production and cleaning out at 3,500 feet; Hamilton and others' No. 1 Fox, spudding; Humble Oil & Refining Co.'s No. 4 Sneed, drilling at 1,125 feet; Nagnolia Petroleum Co.'s Edison, drilling at 1,200 feet; McLester and others' No. 1 Gaily, fishing job at 2,970 feet; Panhandle Oil & Refining Co.'s No. 6 Webb, drilling at 580 feet; Parson and others' No. 1 Moles, drilling in brown shale at 2,100 feet; Pennok Oil Co.'s No. 7 Parton, drilling at 800 feet; Root and others' No. 1 Walker, showing a litt'e oil and drilling at 1,230 feet; Williamson and others' No. 3 Fox, drilling at 500 feet; Bobo and others' No. 1 Amis, cleaning out after shot at 3,295 feet; Cardinal Oil Co.'s No. 2 Matthews, drilling in brown shale at 560 feet; Continental Oil Co.'s No. 1 Sneed, drilling black dry sand at 3,655 feet; will plug back to gray lime at 3,200 feet and shoot; Daugherty and others' No. 1 Johnson, will shoot at 3,800 feet; Grisham and others' No. 1 McDonald, drilling at 400 feet; McBride and others' No. 1 White, cleaning out at 2,795 feet; The Texas Co.'s No. 1 Ramsey, showing some gas and drilling at 1,850 feet; Thornell and others' No. 1 Stubblefield, showing 6,000,000 feet of gas and drilling at 3,155 feet; Turner and others' No. 3 Jones, fishing for casing at 2,400 feet.

Burkburnett-Hirschi

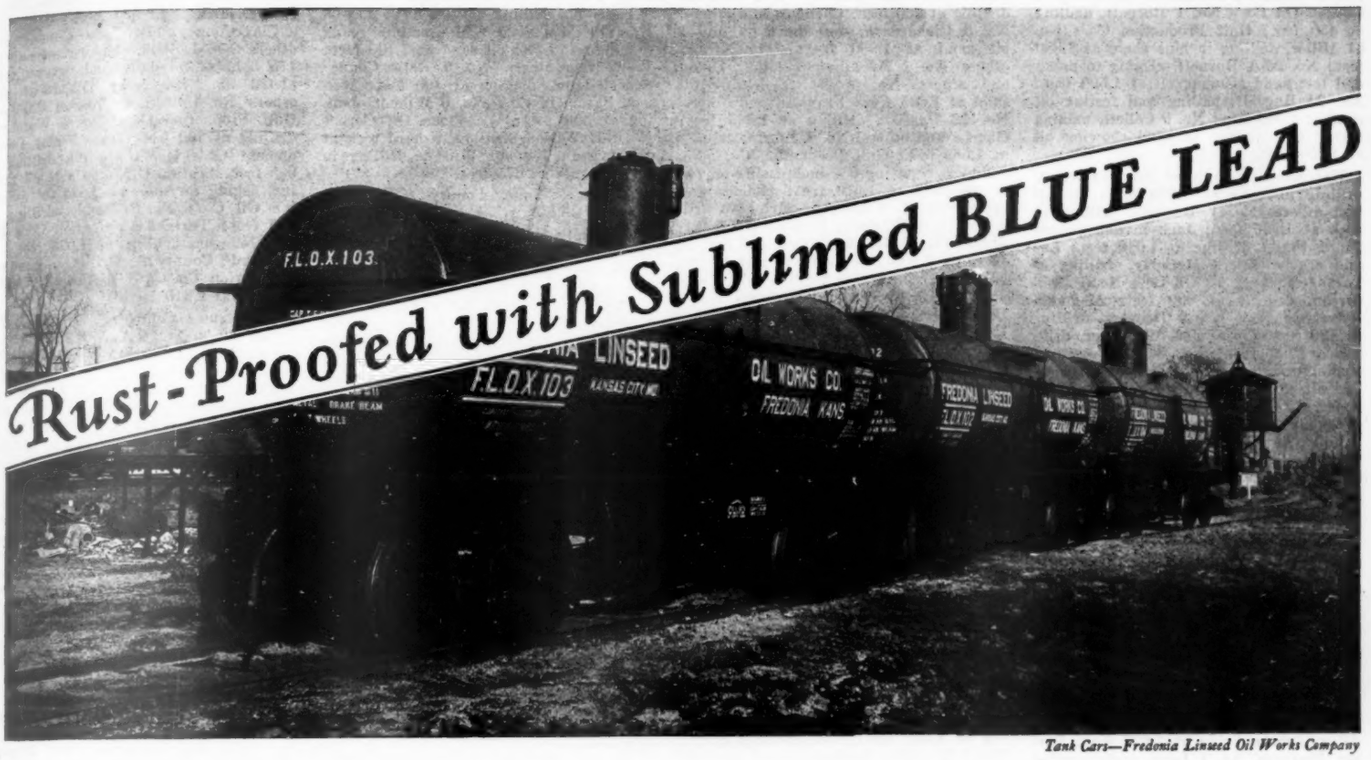
Drilling.—Cochran and others' No. 1 Weeth, drilling in shale at 910 feet; Couch and others' No. 4 Donohoe, drilling at 800 feet; No. 5 Donohoe, bailing casing and testing oil sand at 1,330 feet; Darr and others' No. 1 Jenne, drilling at 180 feet; Griffith Production Co.'s No. 6 Roller, shut down for orders on top of oil sand at 1,200 feet; Keuhn and others' No. 1 Myers, drilling at 200 feet; Magnolia Petroleum Co.'s No. 6 Beach, underreaming 6⅝-inch casing at 1,035 feet; Texhoma Oil & Refining Co.'s No. 1-B Rexford, drilling at 1,405 feet; White and others' No. 1 Donohoe, rigging to pump and test oil sand at 1,325 feet.

Wichita-Electra

Completions.—Adams and others' No. 1 Wigley, dry at 1,810 feet; Burkland and others' No. 1 Burnett, dry at 2,000 feet; Clopton and others' No. 1 Waggoner, dry at 1,903 feet; Culberson and others' No. 26 Jeff Waggoner, 10 bbls. at 1,615 feet; Magnolia Petroleum Co.'s No. 3-C Waggoner, dry at 2,235 feet; John O'Neil's No. 3 Burnett, dry at 750 feet; Ryan Petroleum Co.'s No. 22 Nance, dry at 1,795 feet; Shaw and others' No. 2 McCarty, 25 bbls. at 1,225 feet; Texhoma Oil & Refining Co.'s No. 6-C Burnett, 25 bbls. at 1,225 feet; Texhoma Oil & Refining Co.'s No. 6-C Burnett, 100 bbls. at 1,575 feet; same company's No. 7-C Burnett, 215 bbls. at 1,590 feet; same company's No. 8-C Burnett, 120 bbls. at 1,590 feet; Bower and others' No. 5 Peeler, 240 bbls. at 1,660 feet; Cline and others' No. 1-B Allen, dry at 1,770 feet; Electra Gulf Oil Co.'s No. 6 Mrs. Murray, 125 bbls. at 1,765 feet; Hill and others' No. 8 Overby, 75 bbls. at 1,665 feet; Petroleum Production Co.'s No. 3 Maer, 150 bbls. at 1,650 feet; Underwood Drilling Co.'s No. 5 Maer, 200 bbls. at 1,755 feet.

Drilling Operations

Camp Oil & Gas Co.'s No. 11-B Douglas, side tracking drill pipe at 1,930 feet; Carter and others' No. 2 Burnett, drilling at 220 feet; Culberson and others' No. 27 Jeff Waggoner, drilling at 190 feet; Empire casing on top of oil sand at 1,575 feet; Evangeline Petroleum Co.'s



Tank Cars—Fredonia Linseed Oil Works Company

Combating Corrosive Gases, Heat, Cold Wind and Water

IN railway yards and around refining and manufacturing plants tank cars are always exposed to locomotive and other corrosive gases. On the road the corroding action of the elements has free play upon the metal surface. The rust-proofing pigment protecting them is subjected to the severest sort of test.

The Fredonia Linseed Oil Works Co., Fredonia, Kansas, selected Sublimed Blue Lead in Oil to meet these conditions on their tank cars, built by the Mid-Continent Tank Car Co., of Coffeyville, Kansas.

"We recently had some new tank cars painted," said S. H. Wiley, President of the Fredonia Linseed Oil Works Co., "and after thorough investigation of the qualities of Sublimed Blue Lead, decided that it had merit sufficient to justify us in using the material. We take pleasure in saying that we are well pleased with the results."

The paint, properly mixed, works so easily and smoothly under the brush that a painter can cover a greater area in a day and still produce a paint film that is free from breaks, runs, or alligatoring. The paint film is properly elastic and virtually insensible to changes in temperature.

One hundred pounds of Sublimed Blue Lead in Oil will cover 5216 square feet of iron or steel. This is equivalent to a surface a foot wide and nearly a mile long. It is practically double the performance of the pigments now most used for rust inhibitive purposes. It will not harden in the container.

The durability of Sublimed Blue Lead in Oil as a long time protector of metal surfaces has been proved both in tests and in the field.

Send for your copy of "Fighting Rust with Sublimed Blue Lead."

The EAGLE-PICHER LEAD COMPANY · 868-208 *South La Salle Street* · CHICAGO

EAGLE *Picher Sublimed* **BLUE LEAD** *in* **OIL**

CINCINNATI CLEVELAND PITTSBURGH PHILADELPHIA NEW YORK MINNEAPOLIS
BUFFALO DETROIT BALTIMORE NEW ORLEANS KANSAS CITY ST. LOUIS JOPLIN

Plants: CINCINNATI NEWARK GALENA, KAS. HENRYETTA, OKLA. PICHER, OKLA.
EAST ST. LOUIS, ILL. CHICAGO ARGO, ILL. JOPLIN, MO. HILLSBORO, ILL. (2 *Plants*)

No. 1 Burnett, drilling at 1,470 feet; Gordon Oil Co.'s No. 1 Burnett. drilling at 450 feet; Gulf Production Co.'s No. 61 Miller, drilling in blue shale at 1,880 feet; No. 25-A Burnett, rigging to pump and test sand showing oil at 1,590 feet; No. 24 Burnett, bailing and testing oil sand at 1,570 feet; No. 9 Collett, making casing seat on top of sand showing oil at 1,650 feet.

Hammond and others' No. 1 Burnett. drilling in shale at 1,630 feet; Howell and others' No. 1 Burnett, drilling in rock at 1,925 feet; Jackson and others' No. 1 Flagg, drilling at 1,610 feet; Lee and others' No. 2 McCarty, drilling at 1,200 feet; L. J. K. Oil Co.'s No. 1 Henderson, drilling at 600 feet; Magnolia Petroleum Co.'s No. 9 Douglas, drilling at 120 feet; No. 7 Jeff Waggoner, drilling at 700 feet; No. 36-A Waggoner, rigging to pump and test a sand showing oil at 2,110 feet; No. 37-A Waggoner, drilling at 1,380 feet; No. 13 Waggoner, drilling at 1,200 feet; Panhandle Oil & Refining Co.'s No. 6 McCarty will shoot tight sand at 1,690 feet; Perkins and others' No. 8 Burnett, drilling at 770 feet; Rio Bravo Oil Co.'s No. 7-A Waggoner, resetting 6⅝-inch casing at 1,590 feet; United Central Oil Corp.'s No. 8 McCarty, moving in machine to drill sand showing oil at 1,680 feet; No. 9 McCarty, drilling at 1,150 feet; United Production Co.'s No. 5 Jennings, drilling at 840 feet; Church and others' No. 2 Maer, rigging to pump and test oil sand at 1,768 feet; Electra Gulf Oil Co.'s No. 4 Mrs. Murray, standardizing on top of oil sand at 1,651 feet; Gulf Production Co.'s No. 1 Rhodes, drilling at 1,505 feet; Kruger and others' No. 5 Allen, standardizing at 1,625 feet; Parker Brothers' No. 1 Love, underreaming 8¼-inch casing at 1,410 feet; Petroleum Production Co.'s No. 4 Maer. swabbing 120 bbls. at 1,770 feet; Underwood Drilling Co.'s No. 4 Maer, sand showing oil at 1,790 feet.

Wilbarger County

Drilling: Castleberry and others' No. 1 Bowers, fishing for tools at 50 feet; Church and others' No. 1 Dill, showing 14,000,000 feet of gas daily from sand at 1,255 feet; Dill Farm Oil Co.'s No. 1 Dill, drilling at 900 feet; Dumas and others' No. 1 Stephens, drilling at 1,000 feet; Hart and others' No. 1 Smith, drilling at 340 feet; Herring and others' No. 1 Castleberry, drilling in rock at 1,430 feet; Magnolia Petroleum Co.'s No. 45 Sumner, underreaming 8¼-inch casing at 1,810 feet; Noble Oil Co.'s No. 1 Waggoner, drilling at 1,700 feet; Pigg and others' No. 1 Davis, drilling in rock at 785 feet; Tex-Wyoming Oil Co.'s No. 1 Zipperly, sidetracking tools at 2,160 feet; Thelma Wells and others' No. 1 Wharton, showing estimated 150 bbls. daily production and not yet completed at 2,000 feet.

Archer County

Completions.—Buie Production Co.'s No. 1 Kelly, dry at 1,720 feet; Chambers and others' No. 1-B Andrews, 25 bbls. at 977 feet; Clark and others' No. 2 Mrs. Turbeville, 30 bbls. at 1,023 feet; Dee Brothers' No. 1 Andrews, dry, 1,501 feet; Lowry and others' No. 1 Harbison, 60 bbls. at 1,351 feet; Murchison and others' No. 2 White, dry at 1,632 feet; Shamrock Oil Co.'s No. 3 Campbell, 100 bbls. at 1,353 feet; same company's No. 8-B Richardson, dry at 1,400 feet; same company's No. 5-D Richardson, 100 bbls. at 1,357 feet; Superior Oil Co.'s No. 1 Kinder, dry at 1,776 feet; Swastika Oil Co.'s No. 5-C Richardson, 50 bbls. at 1,348 feet; Texhoma Oil & Refining Co. and others' No. 4 Kempner, 185 bbls. at 1,790 feet.

Archer County Drilling

The Texas Co.'s No. 1 Orton, rigging up company's cable tools at 1,790 feet; Allen and others' No. 1 White, shut down for standard rig on top of oil sand at 1,600 feet; Archer Oil Corp.'s No. 2 Farmer, drilling at 1,470 feet; Barbee and others' No. 1 Anderson, drilling in shale at 1,020 feet; Benninger and others' No. 1 Perkins, drilling in soft rock at 865 feet; Camp Oil & Gas Co.'s No. 1 Falls County School Land, drilling at 710 feet; Carter and others' No. 1 Parrish, drilling at 200 feet; Chenault and others' No. 9 Richardson, shut down on top of oil sand at 1,350 feet; Daniels and others' No. 1 Huckins, spudding; Dixon and others' No. 3 White, drilling oil sand at 1,605 feet; Franklin and others' No. 12 Parrish, drilling at 1,665 feet; Gherke and others' No. 1 Logan ,drilling at 1,585 feet; Gulf Production Co.'s No. 3 Sielge, resetting 6⅝-inch casing on top of oil sand at 1,570 feet; Holmes and others' No. 1 Wilson, preparing to drill deeper at 1,305 feet; Humble Oil & Refining Co.'s No. 2 Orton, drilling in shale at 1,600 feet; Jeffries and others' No. 1 Parrish, fishing for 6⅝-inch casing at 1,670 feet; Jones and others' No. 2 Rutty, drilling at 690 feet; Landreth Production Co.'s No. 1 Oil Investment Co., drilling at 820 feet; No. 1 Turbeville, drilling in blue shale at 1,510 feet; Major Oil Co.'s No. 4 Turbeville, will drill deeper at 1,030 feet; McLain and others' No. 1 Richardson, running casing on top of oil sand at 1,345 feet; Magnolia Petroleum Co.'s No. 3 Robertson. drilling at 200 feet; Mitcham and others' No. 1 Taber, drilling at 200 feet; Norwood and others' No. 1 Orton, drilling in soft rock at 1,525 feet.

Oil Investment Co.'s No. 1 Robertson, bailing and testing oil sand at 1,410 feet; Pace and others' No. 1 White, drilling at 1,620 feet; Panhandle Oil & Refining Co.'s No. 3 Orton, preparing to swab at 1,790 feet; Parker and others' No. 1 Browning, has 90 feet of oil in hole at 470 feet; Waite Phillips' No. 1 Ford, drilling at 1,890 feet; No. 1 Wilson, flowing 90 bbls. daily at 1,530 feet; Saunders and others' No. 1 Logan, drilling at 1,050 feet; Chappell and others' No. 5 K. & K., drilling in rock at 1,605 feet; Shamrock Oil Co.'s No. 5 Campbell, drilling in shale at 1,195 feet; No. 6 Richardson, drilling at 1.190 feet; No. 7 Richardson, drilling at 700 feet; Shappard and others' No. 1 Albright, repairing boiler, depth 1.220 feet; Simms Oil Co.'s No. 2 Nichols, slight show of oil at 1,450 feet; Sunshine State Oil & Refining Co.'s No. 1 Reilly, drilling at 1,665 feet; Texhoma Oil & Refining Co.'s No. 5 K. & K., drilling at 105 feet; Tex-O-Kan Oil Co.'s No. 1 White, making ready to pump and test oil sand at 1,400 feet; Vance and others' No. 1 Falls County School Land, drilling at 100 feet; Wilmot Farm Oil Co.'s No. 6 Wilmot, drilling at 500 feet;. Woodburn Oil Corp.'s No. 8-B Wilson, drilling in hard rock at 1-785 feet; No. 10 Wilson ,drilling in brown shale at 675 feet.

Young County

Completions.—Heydrick and others' No. 1 Graham, dry at 3,000 feet; Keener Oil & Gas Co.'s No. 1 Bashara, dry at 2,848 feet; Monroe Producing Co.'s No. 1 Vaughn, dry at 3,045 feet.

Drilling.—Bashara and others' No. 1-A Graham, drilling at 1,800 feet; Carter and others' No. 1 Rubenkoenig, drilling at 4.220 feet; Dunn and others' No. 1 Johnson, drilling at 850 feet; Foster and others' No. 2 Mahoney, fishing job at 3,886 feet; Humble Oil & Refining Co.'s No. 1 Graham, drilling in shale at 2,010 feet; McGarr and others' No. 1 Johnson, drilling in rock at 2,300 feet; No. 1 Scarborough, drilling at 1,320 feet; Miller and others' No. 1 Hume, drilling at 2,250 feet; O'Neil and others' No. 1 Robertson, drilling at 940 feet; Peter Oil Co.'s No. 1 Simms, underreaming 8¼-inch casing at 740 feet; Reed and others' No. 1 Graham, drilling at 905 feet; Riley and others' No. 1 Buster, drilling at 345 feet; Russell and others' No. 2 Benson, spudding; States Oil Corp. No. 1 Fee, drilling without any oil showing at 3,705 feet; Union Oil Co.'s No. 1-A Keithley, drilling in rock at 2,280 feet.

Wildcats

Baylor County: Drilling.—Cranfill and others' No. 2 Mills, underreaming 6⅝-inch casing at 1,160 feet; Dallas Oil Co.'s No. 1 Showers, drilling in soft rock at 500 feet; Hapgood and others' No. 1 Turbeville, cleaning out to bottom at 1,618 feet; Independent Oil Co.'s No. 1 Robertson, drilling in shale at 1,480 feet; Magnolia Petroleum Co.'s No. 1 Mills, underreaming 6⅝-inch casing at 1,508 feet; Moore and others' No. 1 Fancer, drilling at 550 feet.

Clay County: Drilling.—Cumbley and others' No. 1 Stein, showing estimate of 175 bbls. of oil daily and not yet completed at 1,780 feet; D'Yarmett and others' No. 1 Scott, drilling at 620 feet; Gulf Production Co.'s No. 4 Worsham, drilling at 800 feet; Knox-Finlay Development Co.'s No. 1 Howell, drilling at 385 feet; Scaling Oil Corp.'s No. 1 Scaling, fishing for tools at 2,625 feet; Shelton Oil Co.'s No. 1 Boddy, drilling at 545 feet; Texland Production Co.'s No. 1-E Johnson, drilling at 1,075 feet.

Foard County: Drilling.—Landreth Production Co.'s No. 1 Halsell, drilling in rock at 2,310 feet.

Montague County: Drilling.—The Texas Co.'s No. 2-A Gist, topped gas sand at 647 feet and underreaming 15½-inch casing. Boyd Oil Co.'s No. 1 Salmon, shut down and showing 3 bbls. an hour production at 900 feet; Gulf Production Co.'s No. 1 Benton, drilling at 1,250 feet; Texhoma Oil & Refining Co.'s No. 1 Boulding, running 6⅝-inch casing on top of sand at 1,130 feet.

Throckmorton County: Drilling.—Haile Tex Oil Co.'s No. 1 Elliott, drilling at 825 feet; Hougland and others' No. 1 McKnight, drilling at 505 feet; Humble Oil & Refining Co.'s No. 1 Stubblefield, drilling at 1,200 feet; Larkin and others' No. 1 Conger, underreaming 6⅝-inch casing at 1,395 feet; Texhoma Oil & Refining Co.'s No. 1 Reynolds, drilling at 980 feet; Whatley and others' No. 1 Todd, showing 1,000,000 feet of gas and shut down at 820 feet.

Carson County: Drilling.—The Texas Co.'s No. 4 Burnett, drilling in gray lime at 1,920 feet; No. 1 Mary Burnett, bradenheading off gas at 2,705 feet; No. 2 Mary Burnett, fishing for 10-inch casing at 2,725 feet; American Refining Co.'s No. 1 Burnett, 1,500 feet of oil in hole at 2,945 feet; No. 2 Burnett, fishing for rock bit at 2,530 feet; Culberson and others' No. 1 Armstrong, drilling in lime at 2,925 feet; Danciger and others' No. 1 Burnett, drilling in lime at 1,940 feet; Gulf Production Co.'s No. 1-A Burnett, drilling cave at 1,635 feet; same company's No. 4-A Burnett, underreaming 8-inch casing at 1,860 feet.

Greenwood and others' No. 1 Burnett, cemented 12½-inch casing and shut down at 1,300 feet; Olson Brothers' No. 1 Burnett, moving in tools; Silk and others' No. 3 Burnett, running pipe at 2,905 feet; Skelly Oil Co.'s No. 1 Burnett, underreaming 10-inch casing at 1,890 feet.

Cottle County: Drilling. — Woodley and others' No. 1 Dulaney, showing gas and drilling at 1,750 feet.

Gray County: Drilling.—Wilcox Oil Co.'s No. 1 Combs, showing estimated at 300 bbls. a day production and shut down for storage at 2,985 feet; No. 1 Wilson, drilling in salt and red beds at 1,960 feet; The Texas Co.'s No. 1 Saunders, pulling 6¼-inch casing at 2,708 feet.

Hutchinson County: Drilling.—Barnum and others' No. 1 Johnson, moving in material to drill deeper at 2,805 feet; Gulf Production Co.'s No. 1 Cockrell, drilling cave at 1,780 feet; No. 1 Whittenburg, running 10-inch casing at 2,000 feet; Prairie Oil & Gas Co.'s No. 1 Deahl, running 10-inch casing at 2,020 feet; Tex-O-Oil Co.'s No. 1 Johnson, showing estimated at 5,000,000 feet of gas and shut down at 1,165 feet; Wilson and others' No. 1 Whittenburg, running 8¼-inch casing at 2,777 feet.

Moore County: Drilling.—Producers & Refiners Oil Co.'s No. 1 Masterson, fishing for 10-inch casing at 1,940 feet.

Potter County: Drilling.—Amarillo Oil Co.'s No. 1 Warrick, straightening hole at 250 feet.

Roberts County: Drillingg.—Big Bend Oil Co.'s No. 1 Ledrick, drilling in red sand at 650 feet.

Wheeler County: Drilling.—Cosden and others' No. 1 George, drilling in hard lime at 2,425 feet.

Shackelford County — Completions: Humble Oil & Refining Co.'s No. 1 Miles,

(Continued on Page 106)

East Central Texas

By Staff Correspondent

CORSICANA, Tex., August 2.—The average daily production of the Powell Field for the week ending Wednesday, July 30, was 80,760 bbls. from 736 wells; Mexia, 28,180 bbls. from 510 wells; Currie, 2,880 bbls. from 68 wells and Richland, 16,200 bbls. from 45 wells.

A brace of good wells in the Richland Field was the result of the work in the week in review. Little new work was starte din any of the fields.

The J. K. Hughes Development Co.'s No. 1 Boyd, in the Powell Field was abandoned as dry at 1,180 feet. D. F. Hughes' No. 1 Woolens, Smith survey, was dry and abandoned at 1,016 feet. Garland Kent's No. 1B Boyd, Mathews survey, made a 10-bbl. well at 1,001-35 feet. Neeney & Smith missed the shallow sands in No. 1 Goldman 50 acres and will drill deeper, present total depth 1,474 feet.

The long shutdown Ranger-Vindicator Oil Co.'s test on the Thornton farm, Hazard survey in Navarro County was abandoned at 3,307 feet.

In the Richland Field the Hallmack Oil Co.'s No. 7 Webb, White survey, started at 450 bbls. from sand at 2,945-85 feet.

Tucker and others' No. 2 Davis, John White survey, was good for 800 bbls. on the swab, from sand at 2,928-68 feet.

Wallace and others' No. 1 Davis, Choate survey, made a 65-bbl. well at 2,930-69 feet. It produced 115 bbls. of fluid of which about 50 bbls. was water.

A roundup of the wildcat counties has resulted in clearing the records of a number of wells which have been carried as shut down. These included the following:

In Falls County, Balto Tex Co.'s No. 1 Price, Pillon survey, abandoned at 3,480 feet; Grover Edwards' No. 1 Peters, Thompson survey, abandoned at 1,500 feet; Texola Petroleum Co.'s No. 2 Harlin, Mathers survey, temporarily abandoned at 1,500 feet; Pearce Petroleum Co.'s No. 1 Clark, West survey, abandoned at 3,508 feet; Mayflower and others' No. 1 Covington, Robertson, survey, abandoned at 2,620 feet; Edwards and others' No. 1 Brown, Prather survey, abandoned at 2,110 feet.

Leon County: Kechi Oil Association's No. 2 McKinnon, Carson survey, abandoned at 4,014 feet; Leon County Oil Development Co.'s No. 1 Baldon, Walker survey, abandoned at 1,975 feet; Deep Springs Oil Co.'s No. 1 Smith, Walker survey, abandoned at 1,795 feet.

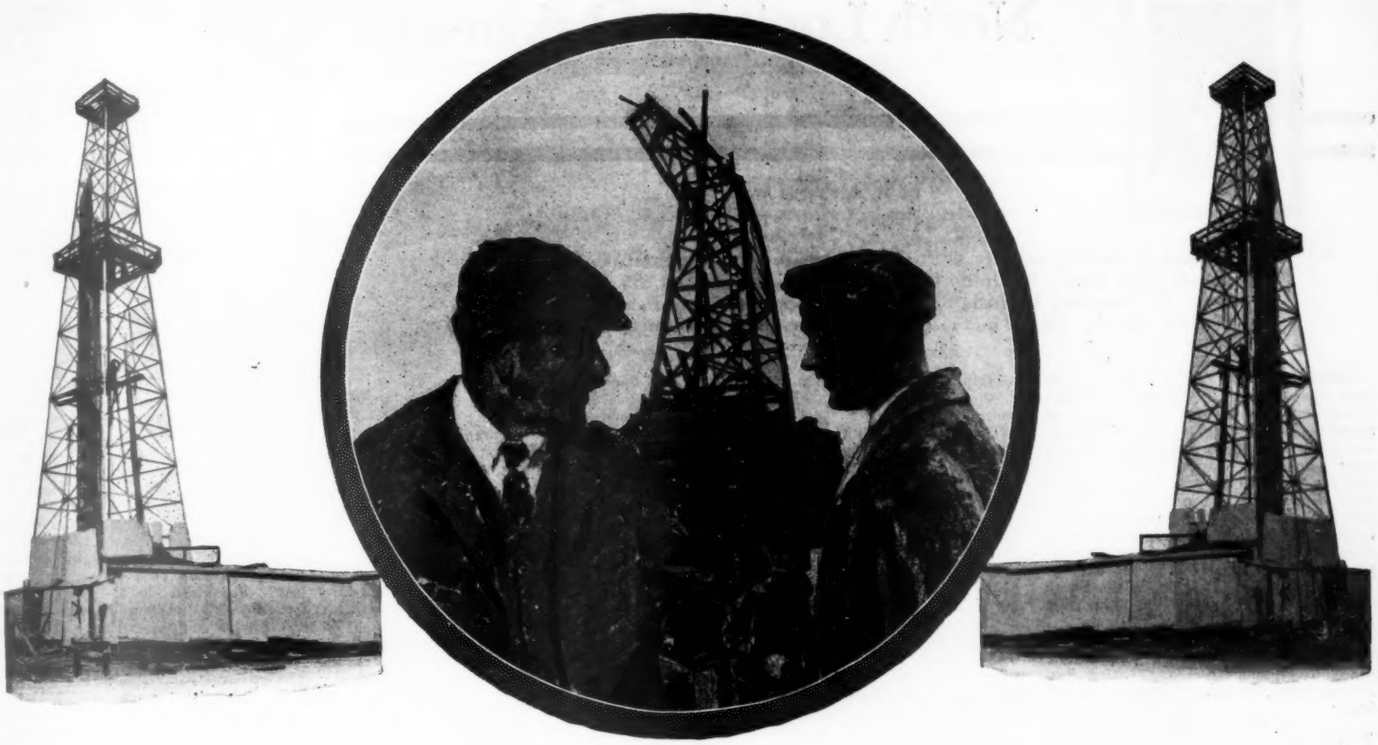
In Falls County Myrin and others' No. 1 DeGraffenreid, DeAguine survey, was fishing for tools at 1,490 feet. Edwin Falsey was drilling at 1,140 feet in No. 1 Penny, Manchaca survey. Myrin & Stallworth were underreaming 6⅝-inch pipe at 1,880 feet in No. 1 Stallworth, Graham survey.

In Freestone County the Keechi Petroleum Co. was making a deep test of No. 1 Pickens, Prewitt survey, and was at a total depth of 4,170 feet. Pratt and others at 3,178 feet in No. 1 Gaddy, Howard survey.

In Robertson County J. G. Bland and others' No. 1 Wilkerson, Ruiz survey, was drilling at 2,000 feet.

Little new work was started in Navarro County. Garland Kent's No. 3 J. F. Allen was below 1,040 feet. The Texas & Brazos Valley Railroad Co. was spudding in No. 1 Harvard, Mathews survey.

In the Richland Field the Gulf Production was rigged up on No. 2 Elkins, Choate survey.



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North Louisiana-Arkansas

By M. L. Vaughn

Decline in drilling activity with small increase in production. Cotton Valley shows small gain. In Union County 23 producers made 4,435 initial production. In Ouachita 11 made 920 bbls. Possible new pool in northern end of Bossier Parish. Slight increase in Smackover heavy production.

SHREVEPORT, La., Aug. 4.—Despite the noticeable falling off in drilling activity, production for the past week showed a slight increase both in North Louisiana and South Arkansas, runs for North Louisiana averaging 56,645 bbls. and for South Arkansas 148,370 bbls. a day. Runs from the new Cotton Valley district in Webster Parish increased from 6,755 to 7,050 bbls., with slight fluctuations in other North Louisiana districts resulting in an increase in the average runs of 255 bbls. Runs from the South Arkansas districts varied but little from those of the previous week with the exception of Smackover heavy which increased from 92,860 to 94,250 bbls. Combined production from the entire field averaged 205,105 bbls., distributed as follows:

North Louisiana	
Bellevue	4,825
Caddo light	10,430
Caddo heavy	2,480
Cotton Valley	7,050
De Soto and Red River	4,550
Elm Grove	830
Haynesville	18,615
Homer	7,865
Total	56,645
South Arkansas	
El Dorado	12,840
Nevada County	1,350
Smackover light	37,620
Smackover heavy	94,250
Stephens	2,310
Total	148,370
Total, both fields	205,015
Previous week	203,475
Increase	1,540

Completions

Union County, Arkansas

Completions in the Union County area of the Smackover Field during the past week numbered 23, with one failure, one gas well and 23 producing oil wells having an aggregate initial production of 4,435 bbls.

The Cherokee Petroleum Co. completed No. 4 Burton, Section 25-16-16, swabbing 300 bbls. at 2,062 feet.

Crawford & Sebastian completed a 25,000,000-foot gas well with a spray of oil at 2,273 feet in No. 4 Graves, Section 3-16-15.

The Dunn Oil Co. completed No. 1 Burton, Section 25-16-16, swabbing 600 bbls. at 2,078 feet and No. 4 Smith, Section 18-16-15, pumping 100 bbls. at 2,086 feet.

The Gulf Refining Co.'s No. 8 M. Alphin, Section 2-16-15, made a 65-bbl. pumper at 1,990 feet.

Holliday, Trustee, completed No. 4 Goff Section 6-16-16, swabbing 85 bbls. at 2,260 feet.

The Humble Oil & Refining Co. completed No. 2 Adcock, Section 22-16-15, pumping 200 bbls. at 2,058 feet, No. 2 Burton, Section 25-16-16, flowing 250 bbls. at 2,110 feet and No. 4 Burton in the same section, flowing 200 bbls. at 2,063 feet, and No. 3 S. J. Smith, Section 18-16-15, pumping 100 bbls. at 2,080 feet.

The Magnolia Petroleum Co. got salt water in No. 1 I. Smith, Section 2-16-17, and the test was abandoned at 2,400 feet.

Meek Trustee, completed No. 2 Burton in Section 25-16-16, swabbing 500 bbls. at 2,100 feet.

Page and others completed No. 4 Alphin, Section 23-16-15, pumping 100 bbls. at 2,010 feet.

The Preston Oil Co.'s No. 2 S. D. Cook, Section 17-16-15, made a 35-bbl. pumper at 2,095 feet.

The Pure Oil Co.'s No. 2 L. M. Hicks, Section 29-16-15, is blowing with air at the rate of 200 bbls. a day, at 2,097 feet.

The Standard Oil Co.'s No. 6 Alphin, Section 2-16-15, is making 100 bbls. at 1,973 feet and No. 1 J. S. R. Saxon, Section 4-16-16, tested salt water and has been abandoned at 2,318 feet.

The Sure Oil Co. completed No. 7 Smith, Section 24-16-16, pumping 135 bbls. at 2,080 feet.

The United Central Oil Corp. completed No. 1 Craig, Section 15-16-15, pumping 90 bbls. at 2,010 feet.

The Unity Petroleum Co.'s No. A-5 Alphin, Section 24-16-16, made a 200-bbl. pumper at 2,080 feet and in the same section No. B-3 Alphin is swabbing 500 bbls. at 2,092 feet and No. C-3 Alphin, 500 bbls. at 2,120 feet.

Waxler and others completed No. 2 Moore, Section 24-16-16, flowing 175 bbls. at 2,065 feet.

Ouachita County, Arkansas

Completions in the Ouachita County area of the Smackover Field during the past week numbered 11, all producers, with an aggregate initial production of 920 bbls.

The Arkansas Drilling Co. completed No. 3 Reynolds, Section 23-15-17, pumping 60 bbls. at 2,290 feet.

J. E. Crosbie,'s No. 2 Berry, Section 33-15-15, made a 150-bbl. pumper at 1,998 feet.

The Magnolia Petroleum Co. completed No. 1 Hardin, Section 20-15-16, pumping 50 bbls. at 2,277 feet.

The Majestic Smackover Syndicate completed No. 3 McElroy, Section 29-15-16, swabbing 100 bbls. at 2,285 feet.

The Marr Oil Corp. completed No. 6 Mullin, Section 28-15-16, pumping 80 bbls. at 2,303 feet.

R. B. Nelson's No. 4 Anderson, Section 26-15-17, made a 50-bbl. pumper at 2,350 feet.

Staves and others completed No. 1 Jeffus, Section 26-15-17, pumping 60 bbls. at 2,355 feet.

Sutton and others completed No. 16 Hughes, Section 21-15-16, swabbing 200 bbls. at 2,307 feet.

The Texas Co.'s No. 5 Stringfellow, Section 28-15-16, made a 70-bbl. pumper at 2,253 feet.

Whittiken and others completed No. 2 Anderson, Section 23-15-17, pumping 50 bbls. at 2,287 feet, and No. 1 Shirey-Berg, Section 29-15-16, pumping 50 bbls. at 2,318 feet.

Cotton Valley Field, Webster Parish

Belchic & Laskey got salt water at 2,692 feet in No. 1 Logan, Section 2-21-10, and the well has been abandoned. The test was about a mile north of production.

The Humble Oil & Refining Co. completed No. 3 Babb in Section 14-21-10, blowing 15,000,000 feet of gas and 100 bbls. of oil at 2,530 feet, and No. 4 Babb, same section, making 12,000,000 feet of gas and 100 bbls. of oil at 2,577 feet.

The Invincible Oil Co. completed No. 2 A. J. Hodges, Section 11-21-10, pumping 200 bbls. at 2,563 feet and No. 4 Merritt, Section 14-21-10, blowing with gas at the rate of 300 bbls. a day, at 2,553 feet.

Bossier Parish

The Atlantic Oil Producing Co. opened up its well on the Bodcau Lumber Co. lease, Section 24-23-12, in the north end of Bossier Parish, and pumped 37 bbls. in four hours. The well is looked upon as the possible opening of a new pool although little development is expected under the present depression.

Woodley & Collins have abandoned their test on the Hamilton lease in Section 16-20-11, testing dry at 2,620 feet. The test was on the north shore of Bodcau Lake about half way between Caddo and Homer Pools.

Bellevue Field, Bossier Parish

Bliss &Weatherbee completed No. F-2 Bliss & Weatherbee, Section 23-19-11, getting 500,000 feet of gas at 318 feet.

Caddo Parish

The Gulf Refining Co. completed No. 218 Ferry Lake, Section 22-20-16, making 3,000,000 feet of gas and 5 bbls. of oil at 2,286 feet.

De Soto Parish

Tarver and others completed No. 3 Matthews, Section 32-12-11, in the southern extension of the Bull Bayou district, making 10,000,000 feet of gas with a spray of oil at 2,640 feet.

Morehouse Parish

The Richland Oil & Gas Co. abandoned No. 1 Chess Wymond, Section 32-19-6, at 2,570 feet.

Ouachita Parish

Haynes and others tested dry at 2,852 feet in No. 2 Dixie Lumber Co., Section 54-17-3e, and has been abandoned.

The Southern Carbon Co. completed No. 33 Fee, Section 21-19-5, making 3,000,000 feet of gas at 2,253 feet.

Union Parish

Davidson & Palmer abandoned their test on the Frost Johnson Lumber Co. lease in Section 17-23-1e, at 2,500 feet.

Columbia County, Arkansas

The Gulf Refining Co. completed No. 3 W. Jones, Section 36-15-20, pumping 30 bbls. at 2,170 feet.

Grant County, Arkansas

The Texas Co. abandoned its No. 3 Chicago Land & Timber Co., Section 18-6-13, at 2,520 feet.

Nevada County, Arkansas

Autry and others completed No. 2 Womack, Section 10-14-21, pumping 200 bbls. at 1,155 feet.

Murry and others abandoned their test on the Eaves lease in Section 11-12-23, at 1,040 feet.

Drilling Operations

Ouachita County, Arkansas

Drilling activity continues on the decline in the Arkansas fields, and there is very little new work in sight. At the close of the week, there were 36 drilling wells, 3 rigs, 17 derricks and 7 locations.

The Atlantic Oil Producing Co. is rigging up to drill No. 4 Jeffus in Section 25-15-17, set 12½-inch casing at 65 feet in Brierton C-1 Section 24-15-17 and is bailing to test 18 feet of sand at 2,322 feet in No. 4 Smith, Section 25-15-17.

Bray-Hawthorne lost hole at 2,120 feet in No. 1 Copenhaven, Section 13-15-17, and skidded over 50 feet west.

Dr. Clark is bailing to test 16 feet of sand at 2,328 fet in No. 1 School Yard, Section 28-15-16, and Clark & Melat set 6-inch casing at 2,240 feet in No. 1 Murphy, Section 4-16-15.

J. E. Crosbie is bailing to test 12 feet of sand at 1,997 feet in No. 3 Berry and has derrick up for No. 4, Section 33-15-15; Finley and others are shut down for water at 1,900 feet in No. 1 Keller, Section 25-15-17, and the Forest Oil Co. set 6-inch casing at 2,265 feet in No. 4 Cramer, Section 27-15-16; has derrick up for No. 5, Section 22-15-16, and rigging up to drill No. 7, Section 27-15-16, with 1,200 feet of oil in hole in No. 15 Cramer, Section 22-15-16, building standard rig to pump.

The Gilliland Oil Co. is drilling at 1,660 feet in No. 4 McRea, Section 30-15-16, drilling at 1,790 feet in No. 3 W. A. Smith, Section 36-15-17, and set 6-inch at 1,845 feet in No. S-3 Wells, Section 25-15-17.

Lee, Trustee, has 800 feet of oil in hole at 2,365 feet in No. 1 Page, Section 26-15-17, and arranging to pump, and Leon and others set 6-inch casing at 2,208 feet in No. 3 Patton, Section 32-15-16.

The Magnolia Petroleum Co. is rigging up to drill No. 2 Brown, Section 36-15-17; Mercury Oil Co. is drilling at 2,195 feet in No. 2 Hardin, Section 28-15-16, and Morefield and others are drilling at 1,700 feet in No. 1 McDaniels, Section 28-14-17.

The Peltier Oil Co. is drilling at 2,590 feet in No. 2 Eagle Mills Lumber Co., Section 25-12-16; Simms Oil Co. set 6-inch casing at 1,950 feet in No. 3 Gaskin, Section 30-15-16, and the Southern Oil Co. tested dry at 2,425 feet in No. 1 Hoffman, Section 22-15-17, and waiting orders.

Staves and others arranging to pump at 2,355 feet in No. 2 Jeffus, Section 26-15-17; Stumph & Todd, drilling at 1,100 feet in No. 3 LaGrone, Section 30-15-16, and Sutton and others have derrick up for No. 16 Ebenezer, Section 20-15-16.

The Texas Co. has 1,500 feet of oil in hole in No. 7 Stringfellow, Section 28-15-16, and arranging to pump at 2,311 feet; Weaver & Smithwick set 4½-inch casing at 2,287 feet in No. 1 Tuberville, Section 17-15-16, and Whittiken and others set 6-inch casing at 2,255 feet in No. 4 Anderson, Section 23-15-17.

Ouachita County, Stephens Field

The Gulf Refining Co. is arranging to pump No. 2 Bettis Hall, Section 31-15-19, at 2,180 feet.

The Ohio Oil Co. is drilling at 1,350 feet in No. 1 Bettis Hall, Section 31-15-19.

Union County, Arkansas

Union County is showing the effects of the general shutdown throughout the field and at the close of the week there were only 52 drilling wells with two rigging up and four locations. Many wells have been completed and are left standing with no effort to put them to pumping until market conditions change.

The Arkansas Fuel Oil Co. has 1,000 feet of oil in hole at 1,995 feet in No. 4 Alphin, Section 11-16-15, and waiting for standard rig to pump; No. 1 Dumas, Section 29-16-15, tested dry at 2,040 and 2,055 feet and arranging to drill deeper; No. 2 J. W. Murphy, Section 8-16-16, set 6-inch at 2,260 feet.

The Bauxite Oil Co. has derrick up for its first well on the Murphy lease, Section 35-16-16; Beggs and others tested dry and temporarily abandoned No. 1 Murphy, Section 36-16-16, at 2,070 feet; Black Duke Oil Corp., drilling at 1,400 feet in No. 1 Wilson, Section 19-16-15; Bond, trustee, set 6-inch casing at 2,035 feet in No. 3 Powell, Section 19-16-15.

Bonderant and others tested dry and waiting orders in No. 1 Turbeville, Section 9-18-12, at 2,300 feet; Brady & Cazart tested dry at 2,330 feet in No. 1 Miller, Section 21-17-15, and arranging to drill deeper.

The Cherokee Petroleum Co. has four rigs running on the Burton lease, Section 25-16-16; J. W. Clark is drilling at 910 feet in No. 2 Alphin, Section 19-16-15; Constantin Oil & Refining Co., arranging to abandon No. 1 Morgan, Section 2-15-16, at 3,015 feet.

East and others are drilling at 1,115 feet in No. 1 Thompson, Section 5-17-15; Gulf Refining Co. has derrick up for Burton A-1, Section 25-16-16, waiting on standard rig for No. 19 L. Werner and drilling at 2,250 feet in No .21, Section 6-16-15.

Freeman and others have derrick up for No. 1 Burton, Section 25-16-16; Federal Petroleum Co. has 600 feet of oil in hole at 2,282 feet in No. 2 Childs, Section 8-16-16, and arranging to pump; its No. 3 Ballard, formerly completed at

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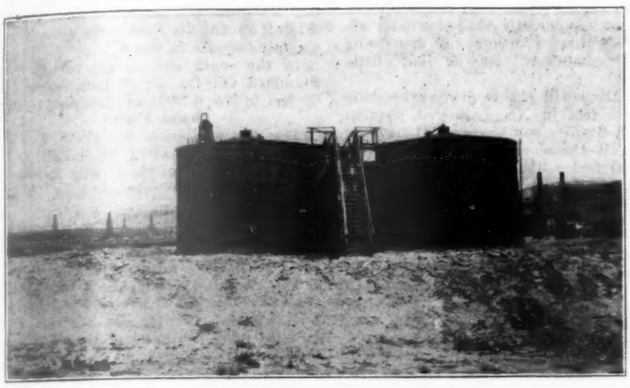

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2,009 feet, making 100 bbls., is milling through casing at 1,770 feet.

The Gilliland Oil Co. set 6-inch casing at 2,242 feet in No. 4 Staples, Section 1-16-17; Humble Oil & Refining Co. running core barrel at 3,075 feet in No. 1 Cordell, Section 1-18-14, and set 10-inch casing at 58 feet in No. 3 Saxon, Section 32-15-16.

The Imperial Oil & Gas Co. is arranging to test 1 foot of sand at 2,195 feet in No. 1 Morgan and has derrick up for No. 2, Section 29-17-14; Lion Oil & Refining Co. plugged back 4 feet and got oil at 2 070 feet in No. 4 Allgulf, Section 17-16-15, and arranging to pump; McFarland and others setting 4½-inch casing at 2,225 feet in No. 1 Graves, Section 3-16-15.

The Ohio Oil Co. has 300 feet of oil in hole in No. 1 Scott, Section 19-16-15, and arranging to pump at 2,082 feet; has made a location for No. 3 Ballard, Section 14-16-15; Reliance Drilling Co. arranging to test 6 feet of sand at 2,330 feet in No. 1 Meakin, Section 9-16-16; Riggs Drilling Co. set 6-inch at 2,225 feet in No. 2 Rice, Section 6-16-16.

W. E. Rutledge, trustee, set 10-inch casing at 125 feet in No. 1 Meek, Section 6-16-16; Simon and others have 1,700 feet of oil in hole and setting 2½-inch tubing at 2,080 feet n No. 1 Burton, Section 25-16-16; Standard Oil Co. drilling in gumbo at 2,155 feet in No. 4 Alphin, Section 2-16-15.

The Star Oil Co. has derrick up for No. 3 Burton, Section 26-16-16; Starke and others are drilling at 2,700 feet in No. 1 Little, Section 21-19-12; Sun Oil Co. set 10-inch casing at 85 feet in No. 3 Smith, Section 1-16-17, and drilling at 1,200 feet in No. 4 Wilson, Section 19-16-15. The Texas Co. has three rigs running on the Hedgewood lease in Section 24-16-16 and Umstead and others are drilling in shale at 2,700 feet in No. 1 Cargile, Section 6-16-14.

The United Central Oil Co. has a showing for a good well in No. 1 Burton, Section 25-16-16, and derrick up for No 2 Burton, and for No. 2 Craig, Section 15-16-15.

Columbia County, Stephens Field

The Amerada Petroleum Corp. is drilling at 2,700 feet in No. 1 Baker-Joiner, Section 2-18-22, and the Arkoil Co. at 2,650 feet in No. 1 Ray-Fullenweider, Section 12-17-22.

The Atlantic Oil Producing Co. is arranging to pump No. 4 Murphy and drilling at 1,200 feet in No. 6, Section 14-15-20.

The Magnolia Petroleum Co. is rigging up to drill No. 2 L. Rinehart, Section 36-15-20, and Phillips and others are rigging up to drill No. 1 Davis, Section 15-18-21.

Cotton Valley District

Webster Parish: Notwithstanding the big wells completed in the Cotton Valley district, there is very little new work being started and at the close of the week there were only 16 wells drilling, 2 rigs and 4 derricks and 1 new location.

The Fortuna Oil Co. is rigging up to drill No. 1 W. Cox, Section 15-21-10; set 6-inch casing at 2,490 feet in No. 3 L. Merritt, and at 2,470 feet in No. 2 S. J. Merritt, Section 14-21-10. The Gulf Refining Co. is arranging to blow with air, No. 2 A. J. Hodges, Section 11-21-10.

Hude & Aarnes are rigging up to drill No. 2 W. W. Cox, Section 22-21-10. Humble Oil & Refining Co. is setting liner to test No. 3 Hodges, Section 11-21-10; has a fishing job at 2,538 feet in No. 1 Merritt and has 1,400 feet of oil in hole at 2,570 feet in No. 2 Merritt, Section 14-21-10, and arranging to pump.

The Invincible Oil Co. is drilling at 1,780 feet in No. 1 Crichton, Section 21-21-10, arranging to pump No. 3 Merritt, Section 14-21-10, and drilling at 1,380 feet in No. 1 Lindsay, Section 22-21-10.

The Ohio Oil Co. set 12½-inch casing at 200 feet in No. 1 Bank of Cotton Valley and made a location for No. 3, Section 2-21-10; has derrick up for No. 4 Bodcau Lumber Co., Section 15-21-10, and set 6-inch casing at 2,445 feet in No. 1 R. L. Holliway, Section 23-21-10.

C. W. Robinson and others have derrick up for No. 1 Cox, Section 22-21-10.

The Standard Oil Co. is milling through bit at bottom of hole at 2,500 feet in No. 1 McInnis, Section 22-21-10, and Woodley Petroleum Co. set 6-inch casing at 2,475 feet in No. 3 Merritt, Section 14-21-10.

Bellevue Field, Bossier Parish

Only one rig is left running in the shallow sand territory in Bossier Parish, Bliss & Weatherbee drilling at 155 feet in Bliss & Weatherbee F-3, Section 23-19-11.

Caddo Parish

With few exceptions, drilling in Caddo Parish is limited to wildcat tests which cover the entire parish. Of these, a number are closed down for lack of water drilling operations, leaving very little actual drilling activity.

Collins and others are drilling out plug in 6-inch at 2,360 feet in their test on the Levy Realty & Planting Co. lease, Section 23-19-24, half way between Bethany and Elm Grove districts.

The Proven Production Co. set 10-inch casing at 200 feet in No. 1 Agurs, Section 6-16-16, 3 miles north of Bethany.

T. C. Adams' test, 10 miles south of Bethany, is closed down for water and the Brewer & Sewall test 12 miles southwest of Shreveport is also closed down for water.

In the Pine Island district, Dixie Oil Co. is drilling in lime at 2,785 feet in No. 14 Robertshaw, Section 14-21-15, at 3-125 feet in No. 43 Robertshaw, Section 13-21-16, and at 950 feet in No. 62 Robertshaw, Section 14-21-15.

In the Ferry Lake district, the Gulf Refining Co. is drilling at 3,035 feet in No. 216 Ferry Lake, Section 14-20-16.

Claiborne Parish

Without exception, every well now drilling in Claiborne Parish is a wildcat test, covering a territory from 5 to 15 miles in all directions from Homer. Many wells are temporarily shut down on account of water shortage and depressing market conditions, leaving but little activity.

The Dixie Oil Co. is drilling in shale at 2,245 feet in No. 1 Eastep, Section 20-20-7, 6 miles southwest of Homer.

The El Dorado Chief Oil Co. drilled to 3,595 feet without getting a showing in No. 1 Gandy, Section 36-22-7, and arranging to abandon. The test is 8 miles southeast of Haynesville.

The Standard Oil Co. is drilling at 2,835 feet in No. 1 Loyd, Section 10-20-5, 10 miles southeast of Homer.

The Triangle Drilling Co. struck the blossom sand at 3,815 feet and drilled into it 1 foot, in No. 1 Ferguson, Section 5-21-5, 10 miles northeast of Homer.

De Soto Parish

A. H. Tarver is rigging up to drill No. 1 Hewitt Hicks, Section 10-11-14, and Ulrey and others are drilling in hard lime and pyrites in No. 1 Frost Johnson, Section 3-11-15, in the Logansport district.

Bossier Parish

The Atlantic Oil Producing Co.'s wildcat test in the north end of Bossier Parish seems to be meeting the same fate that has always attended development in this district. The well made a good showing of oil and when opened up pumped 37½ bbls. of pipe line oil, testing 26.5 gravity in four hours, then sanded up and its success as a commercial producer is in doubt.

In the south end of the parish, the Standard Oil Co. set 10-inch casing at 60 feet in No. 6 McDade, Section 6-16-11.

Grant Parish

The Grant Parish Petroleum Co. is drilling at 1,910 feet in No. 1 Ball, Section 1-7-1w, about half way between Alexandria and Winnfield.

La Salle Parish

The Bur Ban Oil Co. set 8-inch casing at 1,405 feet in No. 2 Urania, Section 21-11-2e, 5 miles north of Urania.

The Stovall Drilling Co. is drilling in sandy shale at 1,415 feet in No. 2 Louisiana Central Lumber Co., Section 27-10-2e, 4 miles southeast of Urania.

The Urania Petroleum Co. is drilling at 1,215 feet in No. 4 Urania, Section 20-10-2e, 2 miles south of Urania.

Morehouse Parish

The Amalgamated Oil Co. is drilling at 2,180 feet in No. 2 Southern, Section 53-20-4; Humphreys Carbon Co. at 2,225 feet in No. 1 Spyker, Section 17-20-5, and Ladel and others at 1,525 feet in No. 1 Feazel, Section 22-20-5, and derrick up for No. 29 fee, in Section 33-20-4.

The Natural Gas Producing Co. set 12½-inch casing at 220 feet in No. 12 Crossett, Section 35-21-4.

Ouachita Parish

The Atlas Oil Co. plugged back from 4,155 feet to 2,200 feet in No. 2 West Virginia Timber Co., Section 3-18-3, tested salt water and arranging to plug back again.

Ladel and others are drilling at 100 feet in No. 26 fee, Section 16-19-5, at 2,115 feet in No. 27 fee, Section 33-20-5, and set 12½-inch casing at 210 feet in No. 28 fee, Section 30-19-5.

The Oil Field Exploration Co. is drilling at 2,200 feet in No. 1 Collins, Section 18-19-5; Palmer Corp., drilling in gumbo at 1,720 feet in No. 1 Grayson, Section 12-19-4, and in shale and boulders at 1,925 feet in No. 2 Lieber, Section 4-19-5, and Southern Carbon Co. has three rigs running on fee land, Sections 5, 15 and 21-19-5.

The Standard Carbon Co. is drilling at 1,700 feet in No. 1 Gayle, Section 18-19-5, and The Texas Co. is drilling plug in 6-inch at 2,100 feet in No. 1 Ladel, Section 2-19-5.

Union Parish

Frankel Brothers are down 50 feet in a test on the T. D. Brazile land, in Section 30-23-2w, 13 miles west of the Oakland production.

Johnson and others are drilling in hard sand rock at 2,335 feet in No. 1 Pryor estate, Section 35-22-2w, 10 miles southwest of the Oakland Pool.

James and others are rigging up to drill No. 1 Talton in Section 14-20-3e, and The Texas Co. is drilling in shale at 2,000 feet in Grayling Lumber Co. B-1, Section 32-21-4e.

West Carroll Parish

The Arkansas Fuel Oil Co. is drilling at 1,745 feet in No. 1 Fiske, Section 8-21-10e.

Arkansas Wildcats

Calhoun County: The Arkansas Fuel Oil Co. is running core barrel at 2,400 feet in No. 2 Childress, Section 1-15-15.

Hempstead County

G. W. Simmons, trustee, is recementing 4½-inch casing at 2,700 feet in No. 1 Adams, Section 36-12-27.

Nevada County

The Kenark Oil Co. is drilling at 1,020 feet in No. 1 Honea, Section 12-13-21; Lockhart and others set 10-inch casing at 150 feet in No. 1 Cornelius, Section 17-10-22, and Smitherman & McDonald set 10-inch at 40 feet in No. 3 McKinney, Section 10-14-21.

News from Fields of Canada

By Victor Lauriston

CHATHAM, Ont., Aug. 2.—In the Canadian West, Imperial Oil, Ltd. is getting well under way with its season's work. No word has been received from the crews sent to the Fort Norman Field when navigation opened; but it is believed they have by this time started the drilling of the new test close to the discovery well.

In Alberta, the new Imperial test near Coalspur, in the foothills west of Edmonton, is reported making hole slowly, the formations being rater difficult. This test in now down about 500 feet. Recent improvement in the weather has made possible the transportation of the necessary material to the new location in the Willow Creek Field, at Rice Creek. The rig has been built and drilling operations there should commence shortly.

In the Okotoks Field, the fishing job at Royalite Oil Co.'s No. 3, Section 6-20-2w-5, has been unsuccessful; and rather than risk damaging a fairly good gas well, it has been decided to allow this well to stand as it is. At Royalite No. 4, Section 7-20-2w-5, drilling is going ahead below the gas sands, and a depth of 3,200 feet has been reached in the testing of the deeper formations.

No further drilling is being done in the Fabyan district or the Irma-Wainwright Field. The rotary outfit from Fabyan, used in the drilling of Grattan No. 2, on Section 14-45-8w-4, is being shipped to the Sweetgrass Field, east of Coutts, where a location will be made near Dead Horse Coulee for test slightly northeast of the Rogers-Imperial well on Section 29-1-11w-4. The Imperial location will possibly be on Section 33. So far, no other new drilling operations are being planned for the 1924 season.

Irma-Wainwright Field

In the Irma-Wainwright Field, east central Alberta, British Petroleum's No. 3, Section 29-45-6w-4, is now drilling at 1,900 feet; No. 4, which is closer to the earlier British Petroleum tests, is drilling at 1,000 feet. In the No. 3 well, the core drill is now being used, with the result that slower progress has been made. At No. 4, some delay was experienced through the failure of the first water well, but a second water well has been drilled.

The Maple Leaf Oil Co., Section 24-45-8w-4, is down 1,675 feet and drilling. Around 1,580 feet considerable gas was encountered, and slight traces of oil were also reported at this horizon. The stata encountered are almost identical with those in British Petroleum's No. 1, Section 36-45-7w-4, which finished a gasser. Lumber has been ordered for Maple Leaf No. 2, and rigging up will commence early in August. A core drill will likely be used for the deeper drilling on No. 1. Wainwright Oil Producers Syndicate, Section 36-44-7w-4, is drilling in the upper horizons. Western Consolidated Oil Co., Section 20-45-6w-4, which has been waiting for casing, is reported to have spudded in early this week.

A letter from Hon. Charles Stewart, Minister of the Interior, to the Edmonton Board of Trade states that the permit granted British Petroleums, Ltd. for the manufacture of carbon black is conditional on the right of Northwestern Utilities, Ltd. which supplies Edmonton to lay a pipe line to the British Petroleums well at any time and secure first call upon the gas.

Pigeon Lake District

In the Pigeon Lake district, west of Wetaskiwin, the Globe Drilling Co.'s test on Section 14-47-27w-4 has encountered hard rock below 1,200 feet and is making hole slowly. Some additional gas showings have been encountered.

In Sweetgrass district, southern Alberta, the Canadian Oil & Refining Co. (Rogers-Imperial) test on Section 29-1-11w-4, east of Coutts, has got the gas flow under control and has made 40 feet since drilling was resumed at 2,528 feet. Use of water to control the large gas flow is reported to be entirely successful; though the necessity of drilling through the water makes progress decidedly slow. The drill is working in a hard formation beneath the gas sand. No. 2 well has been located on Section 28-1-11w-4, about one-half mile east of No. 1 but will not be started until the work at No. 1 is finished. Imperial Oil, Ltd. has a tentative location for a new test in this area on Section 33-2-11w-4, a little north and east of the Rogers-Imperial and is moving a rotary outfit down from Fabyan. The Anglo-Wainwright Oil Co. has made a location on Section 4-2-11w-4, 2½ miles east and 2 miles north of the Rogers-Imperial No. 1.

In the Okotoks Field, the Royalite Oil Co. is investigating the possibility of extracting the sulphuretted hydrogen content from the residual gas furnished the Canadian Western Natural Gas Co. for distribution to Calgary and Lethbridge. Mr. Cooper of Pittsburgh, Pa., is now in

(Continued on Page 112)

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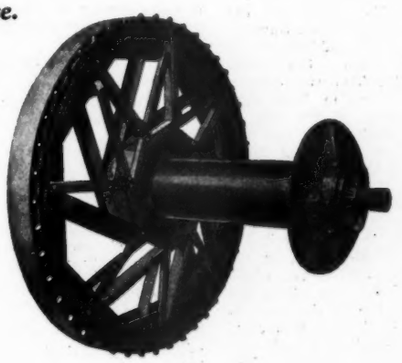

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Oklahoma Field Operations

By C. D. Lockwood

Oklahoma Production exceeds 500,000 bbls. a day as the week opens. McCaskey & Wentz bring in well in Tonkawa deep sand, starting at 189 bbls. an hour. Blackwell Oil & Gas Co. has one good for 75 bbls. an hour, neither well a completion. Big wells in Cromwell.

With the Cromwell Field producing about 60,000 bbls. on Monday of this week and the Tonkawa Field making close to 43,000 bbls. on the same day, the production of the Oklahoma Field as the week opened registered slightly over 500,000 bbls. This is a bigger production than the average for July, 1923, when the output was 492,264 bbls. per day, with production on the down grade. There was nothing in the signs to show that production is on the decrease at the present time. Events of the past few days point to the opposite.

The sensation of the week was McCaskey & Wentz' No. 45 McKee, NE cor. SW Section 34-25-1w, Tonkawa Field, Kay County, a Wilcox or Slick sand test, which started off at 189 bbls. an hour, increased to 240 bbls. an hour and settled back to 190 bbls. an hour, which was Monday morning's report on it. The top of a limey sand was found at 4,154 feet, at one foot in the pay was uncovered and with the well only an additional foot in depth or at a total depth of 4,156 feet it started off. While the well was flowing 189 bbls. an hour the tools were lowered and before they hit bottom the production increased and estimates on what it was making ranged all the way from 250 bbls. to 400 bbls. an hour, but the gauge showed 240 bbls. This was the news that came from the well on Sunday. On Monday morning the 190-bbl-an-hour gauge was reported. This is the largest deep sand well in the Tonkawa district and brought the production from that formation up to about 14,000 bbls. a day. During last week Slick and the Comar Oil Co. had an average of 2,567 bbls., the Pennok Oil Co. 2,469 bbls. and the Comar Oil Co. 3,166 bbls., a total of 8,202 bbls. to which may be added the big production of the McCaskey & Wentz and one other well, the Blackwell Oil & Gas Co.'s No. 1-C McDaniel, in the SE NE NE of Section 34-25-1w, which topped the sand at 3,975 feet, about 180 feet higher than the top of the sand in the deep week of McCaskey & Wentz. It was drilled to 3,980 feet and was flowing 75 bbls. an hour. Both the McCaskey & Wentz and Blackwell Oil & Gas Co.'s new wells are within three quarters of a mile northwest of the discovery well of Slick and the Comar Oil Co.

New wells and agitation of wells already in and heretofore reported sent the production of the Cromwell Pool, in Seminole County, to 60,000 bbls. a day on Monday of this week.

The Carter Oil Co.'s No. 3 Ruby, C NW NE NE Section 16-10-8, made a 1,800-bbl. initial production in sand at 3,411 feet, drilled to 3,475 feet. Hoffer and others' No. 2 Proctor, C SE SE NE, Section 16-10-8, started at 70 bbls. an hour from sand at 3,435 feet, drilled in 21 feet. The McMan Oil & Gas Co.'s No. 1 Little, C SW SW SE, Section 10-10-8, was drilled deeper and on Saturday was reported to have 173 feet of sand penetrated with the sand giving no signs of playing out. It was flowing 65 bbls. an hour.

The Shaffer Oil & Refining Co.'s No. 8, C NE NE NW, Section 22-10-8, made 240 bbls. an hour when the pay sand was reached, dropped off to 140 bbls. an hour and was boosted to 150 bbls. an hour by a little deeper drilling. The Cosden Oil & Gas Co.'s No. 1 SW cor. SE, Section 15-10-8, was good for 60 bbls. an hour in its early stage, from sand at 3,397 feet drilled to 3,484 feet and still in sand. Snowden & McSweeney's No. 1 Tiger, SW cor. NW NE, Section 15-10-8, is a 1,400-bbl. well at 3,416 to 3,535 feet The Central National Oil Co.'s test on the Dunn farm, SW cor. SE SE, Section 4-10-8, got sand at 3,324 feet and at 58 feet in was making 35,000,000 feet of gas and showing some oil. It was estimated that this well would have to go into the sand 75 feet to get the oil pay. The Roxana, Petroleum Corp.'s No. 1 Brown, SE cor. SW SW, Section 10-10-8, was flowing 90 bbls. an hour from sand at 3,473 feet, drilled in 32 feet. It has two wells on this 40-acre lease, making 6,000 bbls. between them.

In the Papoose Pool, Hughes County, the Papoose Oil Co. drilled a well in NE cor. NE, Section 9-9-9, offsetting thre failures and on Saturday it started at the rate of 1,200 bbls. a day from sand at 3,323 feet drilled in three feet. The offsets all showed water and only one of them gave indications of oil. The well of T. B. Slick, SW cor. NW NE Section 3-9-9, was flowing 700 bbls. on Saturday after having been drilled deeper. It got sand at 3,285 feet. Cosden Wigton & Long have a well in Section 3, which on Saturday, after 70 days, was bowing 400 bbls. a day.

Burbank Production

Daily average production in the Burbank Field for the week ended July 30 was as follows:

Company—	Wells	Bbls.
Carter Oil Co.	184	6,835
Comar Oil Co.	7	223
Cosden Oil & Gas Co.	104	5,050
Devonian Oil Co.	16	227
Gardner Petroleum Co.	20	562
Gypsy Oil Co.	196	8,288
Kewanee Oil & Gas Co.	22	675
Laurel Oil & Gas Co.	16	272
Lorraine Petroleum Co.	15	209
Midland Oil Co.	37	3,553
Mid-Kansas Oil & Gas Co.	38	2,397
Peters & Oliphant	1	133
Phillips Petroleum Co.	67	3,186
Phillips Petroleum Co. and Delmar Oil Co.	16	2,433
Phillips Petroleum Co. and Skelly Oil Co.	169	6,863
Prairie Oil & Gas Co.	106	4,450
Producers & Refiners Corp.	29	541
Roxana Petroleum Corp.	59	984
Simons, Morrison et al	29	365
Sinclair Oil & Gas Co.	145	4,790
Skelly Oil Co.	21	1,569
Tidal-Osage Oil Co.	43	941
Twin State Oil Co.	24	2,127
Total	1,362	61,973
Total last week	1,359	65,091
Difference	2	3,118
Kay County Extension—		
George S. Bole	3	987
Carter Oil Co.	11	1,592
Comar Oil Co.	19	1,048
Cosden Oil & Gas Co.	16	1,794
Gypsy Oil Co.	13	1,605
Laurel Oil & Gas Co.	2	333
Phillips Petroleum Co.	31	4,408
Mid-Kansas Oil & Gas Co.	10	1,540
Prairie Oil & Gas Co.	4	403
Pure Oil Co.	5	150
Roxana Petroleum Corp.	8	549
Dye, Tomlinson et al	8	800
Skelly Oil Co. and Phillips Petroleum Co.	20	639
Sinclair Oil & Gas Co.	5	641
The Texas Co.	16	882
Twin State Oil Co.	14	967
Total extension	190	18,338
Total last week	189	18,592
Difference	1	254
Total Burbank	1,552	80,311
Total last week	1,548	83,683
Difference	7	1,767

Following are the daily average pipe line runs from the Burbank Field for the week: Gulf Pipe Line Co., 11,420 bbls.; Cosden Pipe Line Co., 8,631 bbls.; Kay County Gas Co., 7,355 bbls.; Osage Pipe Line Co., 1,084 bbls.; Oklahoma Pipe Line Co., 19,085 bbls.; Prairie Pipe Line Co., 11,157 bbls.; Sinclair Pipe Line Co., 5,431 bbls.; Moore Refining Co., 1,198 bbls.; Standish Pipe Line Co., 5,409 bbls.; Empire Pipe Line Co., 1,036 bbls.; Mid-Kansas Oil & Gas Co., 3,937 bbls.; Magnolia Pipe Line Co., none; Twin State Oil Co., 1,942 bbls.; Ozark Pipe Line Co., 1,826 bbls.

Tonkawa Production

Following is the daily average production of companies in the Tonkawa Field during the week ended July 30:

Company—	Wells	Bbls.
Amerada Petroleum Corp.	36	1,713
Blackwell Oil & Gas Co.	31	1,138
Carter Oil Co.	6	199
Champlin Refining Co.	2	32
Champlin Refining Co. and Twin State Oil Co.	1	11
Comar Oil Co.	320	16,012
Cosden Oil & Gas Co. and Maryland Refining Co.	16	447
Gypsy Oil Co.	97	4,125
Healdton Oil & Gas Co.	27	1,526
McCaskey & Wentz	42	2,426
McMan Oil & Gas Co.	3	21
Pennok Oil Co.	27	4,208
Phillips Petroleum Co.	4	149
Prairie Oil & Gas Co.	12	553
Sinclair Oil & Gas Co.	1	15
Slick and Comar Oil Co.	31	4,484
Southwestern Petroleum Co.	15	702
White Eagle Oil & Ref. Co.	7	274
The Texas Co.	5	62
Total	683	38,097
Total last week	680	38,154
Difference	3	57

Daily average pipe line runs from the field were as follows: Kay County Gas Co., 12,594 bbls.; Ozark Pipe Line Co., 9,574 bbls.; Gulf Pipe Line Co., 3,483 bbls.; Champlin Refining Co., 5,572 bbls.; Bolene Refining Co., 1,434 bbls.; Globe Refining Co., 1,000 bbls.; Producers & Refiners Corp., 553 bbls.; Enid Oil & Pipe Line Co., 386 bbls.; Oklahoma Pipe Line Co., 199 bbls.; Empire Pipe Line Co., 642 bbls.; Golden Rule Refining Co., 185 bbls.; Prairie Pipe Line Co., 1,235 bbls.

The Globe Refining Co. was still running 1,000 bbls. daily from Moore tank farm.

Osage County Activity

Osage County continues its usual activity and can still be relied upon to furnish the right kind of wells at the wrong time. In the Pettit Pool, however, the record breaking gushers are not in danger of losing their titles to the new completions. The Redy Bank Oil Co.'s No. 1, SE cor. SW, Section 20-23-8, was making 120 bbls. from sand at 2,804-61 feet, after topping the big lime at 2,535 feet. The Marland Oil Co.'s No. 12, C SE NW SE, same section, which started off at 60 bbls. per hour from the second break at 2,630-73 feet, was making water at latest report. The same company's No. 9-B, a twin well, CNL NW NE SE, same section, was good for 48 bbls. daily from the Bartlesville sand at 2,312-35 feet, the pay starting at 2,316 feet. The Indian Terriory Illuminating Oil Co. shut in No. 324, CEL NW SE SE, same section, as a 5,000,000-foot gasser from two sands at 765-75 and 800-05 feet.

The Beacon Oil Co. was spudding No. 1, NW cor. SW, Section 21-23-8, and was drilling No. 2, CWL SW NW SW, same section at 100 feet.

The Riverland Oil Co.'s No. 4, CSL NE SW, Section 14-22-8, made 100 bbls. after a shot of 60 quarts in the second break at 2,642-52 feet. This well had green shale from 2,630 to 2,635 feet.

The Owen-Osage Oil Co. had a packer in place for No. 300 SW cor. SE SW, Section 5-22-11.

The Devonian Oil Co. and others abandoned No. 1, SE cor. Section 15-1-10, as a failure at 2,570 feet.

The Indian Territory Illuminating Oil Co. was drilling at 250 feet in No. 1, SW cor. NW NW, Section 1-21-8, and the Barnsdall Oil Co.'s No. 8, NE cor. SE, Section 2-21-8, was a duster at 2,505 feet.

In the Country Club Pool north of Tulsa, the Mutual Oil Co. found the second break at 2,025-35 feet in No. 9, C SE NW, Section 28-20-12, and it was good for 800 bbls.

The Mutual Oil Co.'s No. 12, CWL NW SE, Section 32-24-8, was dry and abandoned at 728 feet. The Dresser Oil Co.'s No. 14, CEL SW SW Section 34-25-9, was also abandoned as dry at 2,448 feet. Oliphant and others shut in No. 4, C NW NE NW, Section 32-24-9, as a 10,500,000-foot gasser at 2,480-90 feet.

In the Burbank Field

In the Burbank Field, the Mid-Kansas Oil & Gas Co.'s No. 6, CEL NE SE NW, Section 26-27-5, was good for 150 bbls. after a 90-quart shot in sand at 2,930-32 feet. The Skelly Oil Co.'s No. 1, NE cor. NW, Section 35-27-5, topped the sand at 2,925 feet, found first oil at 2,940 feet and a second pay at 2,970-84 feet. After a shot of 60 quarts, it was a 100-bbl. well.

The Texas Co. was spudding No. 2, SW cor. SE NW, Section 18-27-6, and was rigging up No. 1, SE cor. NW, same section, and was spudding No. 3, SE cor. SW NW, same section, and No. 4, SW cor. NW. The Kewanee Oil & Gas Co.'s No. 6, SW cor. SE SE, Section 18-27-6, made 20 bbls. after an 80-quart shot. Sand was topped at 2,901 feet and there was oil from 2,920-54 feet. The Phillips Petroleum Co.'s No. 1, NW cor. SE, Section 20-27-6, was good for 150 bbls. from sand at 2,914-55 feet after a 100 quart shot. The same company's No. 2, SW cor. NW SE, same section, made 100 bbls. after a shot of 100 quarts in sand at 2,904-55 feet.

The Carter Oil Co. plugged No. 1 Johnson, NW cor. Section 9-26-6, in red granite at 4,241 feet. The Cosden Oil & Gas Co.'s No. 13, C SW NE SE, Section 17-26-6, was shot with 135 quarts from 2,894-2,950 feet and responded with 200 bbls. Same company was spudding No. 5, SW cor. SE SE, same section.

The Midland Oil Co.'s No. 10, C SW NE SE, Section 13-27-5, was a 150-bbl. producer from sand at 2,937-94 feet following a shot of 140 quarts.

In the extension, the Skelly Oil Co. was fishing for tools in No. 1 Clubb, CNL NE NW SW, Section 9-27-5, which was flowing 50 bbls. from sand at 2,936 feet, with first oil at 2,944 feet. The Laurel Oil &Gas Co. was spudding No. 4 Mehojah, CNL NW NE SW, Section 4-27-5.

The Cosden Oil & Gas Co. was cleaning out No. 11, CEL SE NE SW, Section 14-27-5, and swabbing 30 bbls. from sand at 3,013-58 feet.

Northwestern Kay County

In northwestern Kay County, Shidler & Hickman found 1,060,000 feet of gas in No. 2 Fulton, CEL SW SE SW, Section 12-28-1w, in sand at 770-74 feet.

Polin & Denny were drilling at 600 feet in No. 1 Case, SE cor. SW, Section 4-27-1w, and the Blackwell Oil & Gas Co. was spudding No 1 Crouch, SW cor. Section 10-27-1w. The Carter Oil Co. was also building a rig for its No. 1 Massey, NE cor. Section 17-27-1w.

The Marland Refining Co. and Miller Bros. were building a rig for No. 2 Waters, SE cor. NW, Section 19-25-2e.

In southern Noble County, the Twin State Oil Co. was spudding No. 1 Kinney, NW cor. NE, Section 30-21-1w. In Garfield County, Hollingsworth and others abandoned No. 1 Crane, CSL SE SW, Section 20-22-4w, as dry at 2,360 feet. The Sinclair Oil & Gas Co.'s No. 10, C NE SE SW, Section 25-22-4w, made 20 bbls. on the pump from sand at 1,560-70 feet. Boepper and others had a rig built for No. 1, CSL SW SW NE, Section

12-21-4w. The Danciger Brothers abandoned No. 1 Rhodes, NE cor. NW, Section 25-20-4w, as dry at 3,002 feet.

Watchorn Pool

In the Watchorn Pool of western Pawnee County, the Watchorn Oil & Gas Co.'s No. 11 Miller, CNL NE SW, Section 33-23-3, made 408 bbls. natural from sand at 4,037-40 feet. The Magnolia Petroleum Co. was building a rig for No. 3 Saunders, NW cor. SW, Section 4-22-3, a twin to No. 2.

In the southern part of the county, the Fern Oil & Gas Co. was drilling at 2,970 feet in its old well, No. 1, SW cor. NW, Section 22-20-6. In the Kaystone Townsite, the Mutual Oil Co.'s No. 1, Lot 1, Block 102, Section 25-20-9, was good for 25 bbls. after a 40-quart shot in sand at 2,421-26 feet.

In Northeastern Payne County, the Magnolia Petroleum Co.'s No. 1 Underwood, NW cor. SW, Section 21-19-6, was shot with 30 quarts in sand at 3,448-89 feet, with total depth at 3,468 feet, plugging back from 3,635 feet and made a 10-bbl. well.

Tulsa County

In Tulsa County, the blasting of several fond hopes in the town lot district west of Tulsa, and the completion of a 75-bbl. well north of town were the features of the week. The Tidal Oil Co.'s No. 11 Chaney, CEL NW NW, Section 16-21-13, made 75 bbls. after a shot of 150 quarts in sand at 1,290-1,335 feet. This well is in the old Bird Creek district which flowered about the year 1910.

In the Bruner Pool, the Shaffer Oil & Refining Co.'s No. 1-A, SW cor. NW SW, Section 5-19-12, made 92 bbls. in the first 24 hours from sand at 2,035-47 feet. This well is a north offset to Thompson & Black's No. 1-A Mary Partridge which was credited with 1,850 bbls. initially. The Sand Springs Home was rigging up tools for No. 7 Bruner, CSL NW SW SW, Section 6-19-12.

In the Lawnwood-Trimble subdivision across the road south of the Bruner area, Allinson and others abandoned No. 1, Lot 7, Block 6, on the NW 10 acres of Section 8-19-12, at 2,198 feet, and Buell and others abandoned the location for No. 1, Lot 10, Block 4. Don C. Matthews and others likewise reported a failure in No. 1, Lot 9, Block 6, the hole being plugged at 1,990 feet. Shreve and others had a 50-bbl. well in No. 1, Lot 29, Block 1, from sand at 1,970-96 feet. C. H. Terwilleger was rigging up tools for No. 3 Harrison, NW cor. SW NW, Section 8-19-12.

Calvin & Belt's No. 1 on Lot 14, Block 3, NE NE Section 8-19-12 was abandoned as dry at 2,032 feet. Caldwell & Son's No. 1 Townstrip, NE NE Section 8-19-12, located on the same 10 acres as the dry hole, was a 10-bbl well at 1,969-82 feet after a 40 quart shot. The well was drilled through sand at 2,002-04 feet and plugged back, and the Brooks Drilling Co. had tools rigged up on No. 1-A J. Hawkins, SE cor. NE NW SW, Section 29-19-12.

Farther south, the Sand Springs Home completed a duster in No. 2 Grayson, NW cor. SE, Section 18-19-12, at 2,333 feet. The Brooks Drilling Co. finished No. 1-A Grayson, NW cor. SW SW, Section 29-29-12, for 50 bbls. from oil pay at 2,101-09 feet. The Steinboor Oil Co. was drilling No. 1-A Roberts, SE cor. NE NE, Section 30-19-12, at 1,570 feet.

Another town lot producer was Posey Short's No. 1, Lot 36, Block 1, Section 8-19-12, which made 20 bbls. after a 30-quart shot in sand at 1,955-90 feet.

Huff and others spudded and shut down No. 1 NW cor. SE NW, Section 14-19-13.

Still another town lot well reported was Crosby & Myers' No. 1, Lot 3, Block 2, Section 8-19-12, which made 60 bbls. natural from sand at 1,956-73 feet.

In the Vern Pool, the Echo Oil Co.'s No. 6-A Grayson, CEL NE NE, Section 5-19-12, made 25 bbls. from oil sand at 2,053-88 feet. The first pay was found at 1,970-2,009 feet.

In western Tulsa County, T. B. Slick was rigging up tools for No. 1 Berryhill, CEL NE SW, Section 1-17-14. Wade and others were drilling at 150 feet in No. 3 Drew, SE cor. NW, Section 1-17-14. Hazlett and others had a show of gas and water at 1,523-25 feet in No. 1-A Grayson, NW cor. SE NE, Section 24-17-14.

In the Mounds district in southern Tulsa County J. E. Crosbie's No. 13 Behen, SW cor. NE SW Section 10-16-11 was a 10-bbl. well at 1,711-28 feet after a 40-quart shot. The Sheldon Oil & Gas Co. has commenced drilling No. 1, Lot 6, Block 11, SW NW, Section 8-16-12, and was drilling below 650 feet in No. 1, Lot 19, Block 12, SE cor. SW NE, Section 8-16-12. Noble is drilling below 600 feet in No. 2, Lot 4, Block 24, NE cor. SE SE, Section 8-16-12. S. W. Anthony and others were drilling below 1,300 feet in No. 1, Lot 18, Block 24, NW cor. NE SW SE, Section 8-16-12. P. B. Flynn's No. 1, Lot 20, Block 1, NE cor. NW SE, Section 8-16-12, was drilling below 600 feet. Howard & Duffield's No. 1, Lot 22, Block 24, NE cor. SW SE, Section 8-16-12, made 234 bbls. naturally the first 24 hours from sand at 1,990-2,051 feet. Suppes and others' No. 1, Lot 22, Block 13, SE cor. NW SE, Section 8-16-12, made 50 bbls. the first 24 hours from sand at 2,384 feet, drilled in 9 feet. Miller Brothers' No. 1 Lot 3. Block 12, CEL NW SE, Section 8-16-12, was drilling below 450 feet. Humphrey, Stover and others' No. 1, Lot 1, Block 36, NE cor. SE SW SE, Section 8-16-12, was drilling at 1,260 feet. R. D. Hartman & Sons had a rig on the ground for No. 1 S. Taylor, NW cor. NE SW SW, Section 17-16-12. The Peer Oil Co.'s No. 1-A Squire, NW cor. NE SW SW, Section 17-16-12. The Peer Oil Co.'s No. 1-A Squire, NW cor. NE Section 35-16-12 was drilling below 1,100 feet.

In the Tuskegee district Creek County, Evans and others have a rig up for No. 1 NE cor. SE SE NW, Section 4-14-10 and Hiram C. Wilson has a rig up for No. 1 SE cor. NE SE NW, Section 4-14-10.

In Muskogee County the Hillside Oil Co. has commenced drilling No. 1 McDaniels, CSL NW SE, Section 33-16-15. H. E. Jones spudded and shut down his No. 1 Crossley, NW cor. SE Section 9-16-16.

In the Stroud district, Lincoln County, Wheeler & Webb were drilling No. 2, Block 6, CNL S½ NE NW Section 12-14-6 was drilling at 1,251 feet.

Creek County

In Creek County, The Texas Co. abandoned No. 4-A King, CWL SW SE SW, Section 17-18-9, as dry at 1,800 feet.

Other dusters were abandoned by the Bu-Vi-Bar Petroleum Co. in No. 1 Narchubby, NW cor. SE, Section 26-15-8, at 3,253 feet, and by C. G. Tibbens in No. 2 Hill, NE cor NW NW, Section 35-15-8, at 3,838 feet.

The Pure Oil Co. was drilling No. 1 Colbert, SE cor. NE NW, Section 29-15-9, at 680 feet. Hiram C. Wilson had a rig in place for No. 1, NE cor. SW, Section 4-14-10, and Evans and others had another for No. 1, SE cor. NE SW, same section. Several other wells were being spudded in this section also.

In the Tuskegee Pool, the Burke-Greis Oil Co. had a rig on the ground for No. 3 Barnett, NE cor. SE NE, Section 31-14-10, and the Empire Gas & Fuel Co. was drilling No. 1 Fixico, NW cor. SW, Section 32-14-10, at 900 feet.

In northwestern Creek County, the Lassen Brothers were running the 6-inch casing with packer to shut in No. 1, SW cor. NW, Section 13-19-8, which had 2,500,000 feet of gas in the Cleveland sand and was estimated as a 75-bbl. oiler at 1,570-83 feet. The Shaffer Oil & Refining Co. abandoned No. 1 Postoak, NW cor. SW SE, Section 15-19-9, as dry at 3,173 feet. The Mid-West & Gulf Oil Co.'s No. 1 Murrell, SE cor. NW, Section 17-19-9, was good for 4,500,000 feet of gas in sand at 2,221-29 feet.

The Atlantic Oil Producing Co. plugged a duster in No. 1 Barnett, NE cor. SE NW, Section 7-18-9, at 3,434 feet. The Texas Co.'s No. 2 Samuel, SE cor. SW SW, Section 2-18-9, was a 2,000,000-foot gasser in sand at 2,108-10 feet.

The Roland Oil Co.'s No. 1 Buckner, NW cor. NE SW, Section 25-16-8, was a duster and was abandoned at 3,740 feet. The Atlantic Oil Producing Co. was spudding No. 1 Johnson, SE cor. SW SE, Section 14-17-8 and the Aztec Oil Co. had a rig up for No. 1 offset in the SW cor. SE SE, same section. The Waite Phillips Co. shut in No. 3 Grayson, NE cor. Section 23-17-8, at 2,290 feet, with a 50-bbl. show in sand at 2,252-87 feet. The Oklahoma Producing & Refining Corp. abandoned No. 1 Barring, NE cor. SE, Section 28-17-8, as dry at 3,718 feet.

The Bu-Vi-Bar Petroleum Co.'s No. 1 Winn, C NE SW, Section 18-17-9, was a 12-000,000-foot gasser in sand at 2,697-2,713 feet.

Hartman & Williams were drilling at 450 feet in No. 1 Fore, NW cor. SW, Section 35-16-10. The Independent Oil & Gas Co.'s No. 1 Harrison, NE cor. SW, Section 36-16-10, produced 43 bbls. in 12 hours from oil sand at 2,705-28 feet and was drilling at 2,740 feet in shale.

Okmulgee County

In Okmulgee County, the Riverland Oil Co.'s No. 6 Marshall, NW cor. SE SE, Section 8-16-12, produced 325 bbls. initially from sand at 2,005-50 feet.

The Newblock Oil Co. abandoned No. 1-A Ackley, SE cor. NE, Section 36-16-13, as dry at 1,797 feet.

The Georgia Petroleum Co. shut down No. 3 Rowsey, CEL SW SE, Section 22-13-11, at 1,550 feet. King & Jackson were drilling at 1,160 feet in No. 4, SE cor. SW NW, Section 2-13-12.

The Kingwood Oil Co. abandoned No. 1 Stake, C SE SE SE, Section 24-13-14, as dry at 3,221 feet.

Several failures were abandoned. The Invader Oil Corp.'s No. 4 Starr, NE cor. NW SE, Section 2-14-14. was dry at 2,683 feet; the Southwest Oil Fields' No. 6 Simpson, NW cor. SE NW, Section 36-15-13, at 1,801 feet; Payne and others' No. 1, NE cor Section 16-15-14, at 2,360 feet; W. L. Schott's No. 1 Harrison, SE cor. SW NE, Section 19-15-14, at 2,309 feet; the Tidal Oil Co.'s No. 1 Scott, SE cor. NW SW, Section 18-13-14, at 2,644 feet.

The Iron Mountain Oil Co.'s No. 5 Thornberry, CSL SE SW, Section 13-13-14, made 15 bbls. from sand at 1,990-94 feet. The Utah Oil & Gas Co.'s No. 12 Scott, SW cor. NE, Section 15-13-14. was a 20-bbl. well after a 60-quart shot in sand at 1,910-29 feet. Akin & Curtis had 7,000,000 feet of gas from sand at 1,795-1,803 feet in No. 5 Fox, C N½ NW, Section 22-13-14.

In McIntosh County, a duster was abandoned by the Wooster Oil Co. in No. 3 Stand, C NE NE NE, Section 17-11-14, at 3,600 feet. It was an old well.

Okfuskee County

In Okfuskee County, Blakely and Amerada Petroleum Co.'s No. 1 Harvison, SE cor. SW SE, Section 17-12-10, which originally made 200 bbls. natural from sand at 2,833-36 feet, was making 165 bbls. at latest report. The Independent Oil & Gas Cas Co.'s No. 1 Carolina, NE cor. SW SW, Section 33-12-11, was good for 586 bbls. from white sand at 2,910-21 feet, with the best pay in the last 5 feet. The Josey Oil Co.'s No. 1, NW cor. Section 33-12-11. looked for 90 bbls. from sand at 2,977-97 feet but there was 20 bbls. of water in the last foot. The same company's No. 4 McCoy, SE cor. NW SW, same section, made 883 bbls. natural the first 24 hours from pay sand at 2,893-98 feet. No. 3 McCoy, SW cor. NE SW, same section, was fishing at 2,795 feet.

Cromwell Field

In the Cromwell Field, Seminole County, the Pure Oil Co. was drilling No. 4 Bruner, C SW SW SE, Section 9-19-8, at 255 feet, and had rig on the ground for No. 5 Bruner, C NE SE SE, same section. The Burke-Greis Oil Co. was drilling at 600 feet in No. 3 Brown, C SE SE SW, Section 10-10-8. The Carter Oil Co. had rigs on the ground for No. 3 O'Neil, C SE NE SW, and No. 4 O'Neil, C NE NE SW, Section 15-10-8. The Cosden Oil & Gas Co. was rigging up No. 3 Harjo, C NW SW NE, same section, and was spudding No. 3 Yarhola, C NE SW SE, same section, at 86 feet. The Roxana Petroleum Corp.'s No. 1 Tiger, C NE SE NE, Section 15-10-8, was drilling at 275 feet. The Wilcox Oil & Gas Co. was also spudding No. 3 Bruner, C NE SE SW, same section. Another new well was the Carter Oil Co.'s No. 1 Roberts, C SE SE NW, Section 16-10-8, which was spudding at 320 feet. The Independent Oil & Gas Co.'s No. 2 Harjo, C NE NW NE, Section 21-10-8, was flowing 500 bbls. daily from 24 feet of sand topped at 3,513 feet. The same company was building a rig for No. 3 Harjo, C NE SW NE, Section 21-10-8. The Berry Petroleum Co. was drilling at 420 feet in No. 3 Yarhola, C SE NW NE, Section 22-10-8. The Cosden Oil & Gas Co. was fishing bailer at 540 feet in No. 1 Yarhola, C NW SW NE, same section.

New Rigs on Ground

The Pure Oil Co. had a rig on the ground for No. 6 Bruner, C NE NE SE, Section 9-10-8, and the Sinclair Oil & Gas Co. had timbers for No. 1, C NW NE NE, same section. The Kingwood Oil Co. and Sinclair Oil & Gas Co. also had a rig on the ground for No. 1, SW cor. NW, Section 10-10-8. The Roxana Petroleum Corp. had another building for No. 6 Brown, C NW NW SW, Section 10-10-8. The Tidal-Osage Oil Co. was building a rig for a test on the extreme east side of the pool in the C NW SW SW, Section 14-10-8. Snowden & McSweeney were spudding No. 2 Tiger, C NW NE NE, same section. The Kingwood Oil Co. and Sinclair Oil & Gas Co. also had a rig on the ground for No. 1, SW cor. NW, Section 10-10-8. The Roxana Petroleum Corp. had another building for No. 6 Brown, C NW NW SW, Section 10-10-8. The Tidal-Osage Oil Co. was building a rig for a test on the extreme east side of the pool in the C NW SW SW, Section 14-10-8. Snowden & McSweeney were spudding No. 2 Tiger, C NW NW NE, Section 15-10-8, and the Amerada Petroleum Corp. was rigginf up a rotary for No. 8 Bruner, C SW NW SE, Section 16-10-8.

The Carter Oil Co.'s No. 1 Hall, C SE NE NE, same section, was flowing 108 bbls. an hour from sand at 3,473-3,530 feet. The same company's No. 3 Hall, C NW NE NE, same section, was spraying 310 bbls. daily from sand at 3,411-30 feet and was rigging separators. No. 2 Roberts. C NE SE NW, same section, was being spudded by the Carter. The Gilliland Oil Co. was spudding No. 6 proctor, C SW NW NE, Section 16-10-8, and was drilling No. 7, C NW SW NE, same section, at 435 feet, and was spudding No. 8, C SW SW NE.

T. B. Hoffer and others' No. 3 Stidham, C NW SE NE, Section 16-10-8, was drilled 10 feet deeper from 3,475 feet in sand topped at 3,455 feet and was making 1,525 bbls. The McMan Oil & Gas Co. was drilling at 435 feet in No. 2 Baker, C SE NW NW, Section 16-10-8, and the Superior Oil Corp. was below 550 feet in No. 2, C SE NE NW, same section, and at 250 feet in No. 3 Baker, C NW NE NW, same section. The Independent Oil & Gas Co. was spudding No. 3 Harjo, C NE SW NE, Section 21-10-8, two locations south of No. 2, which was showing 3 per cent water in the flow line while making 500 bbls. daily from sand at 3.512-55 feet. The Tidal Oil Co.'s No. 6 Harjo, C SW NE NE, Section 21-10-8, was good for 50 bbls. an hour from sand at 3,468-3.521 feet.

The Mid-Kansas Oil & Gas Co.'s No. 3 Alexander, C NW NW NW, Section 15-10-8, an old well, was making 95 bbls. hourly from sand at 3,419-97 feet. The Carter Oil Co.'s No. 2 O'Neil, C SW NE SW, same section, was making 984 bbls. natural from sand at 3.466-3,535 feet.

Wewoka Field

North of the Wewoka Field, W. R. Ramsey was drilling at 400 feet in his No. 1, C SE NW NE, Section 21-8-8.

The Wewoka field's deep test which was heralded for a time as the beginning of a deeper drilling campaign but which turned into a disappointment, was plugged back from 4,161 feet to sand at 3,873-92 feet and was swabbing 40 bbls. It was the Dixie Oil Co.'s No. 5 Long "A," CWL SW SE NE, Section 32-8-8. The same company's No. 2 Ed Parker, C NW NE SW, same section, was drilling at 260 feet. The Shaffer Oil & Refining Co. was spudding No. 2 Perryman, C NW NW NW, same section. The Dixie Oil Co.'s No. 3 Long "A," C SW NW SW, Section 33-8-8, was a 200-bbl. well from sand at 3,185-3,217 feet

Johnson & Ash were drilling No. 1 Jefferson, C NW NE SW, Section 35-8-8, at 200 feet. Douglas Oil Co. abandoned

(Continued on Page 118)

Gulf Coast Oil Operations

By P. L. McGreal

Rycade Petroleum Corp.'s No. 4-E Cow Bayou, Orange Pool, flowing 3,600 bbls. and No. 2-E 3,000 bbls. Sun Oil Co.'s No. 5 Gunstream flowing 2,000 bbls. Torsional balance used on new saline dome possibility near Damon Mound. Gas in Walhunda Co.'s No. 1 Jones test Guadalupe County.

HOUSTON, Tex., Aug. 4.—The possibility of a new saline dome, located 5½ miles east of Damon Mound, in Brazoria County, was the big feature of the week's developments in the Gulf Coast region. Gas in the Jones test of the Walhunda Oil Co., 1 mile northwest of production on the Guadalupe County side of the Luling Field, is attracting attention there. Casing was set at 1,754 feet. Luling crude was cut 10 cents to 90 cents on July 26 and Somerset crude prices also reduced to harmonize with quotations for North-Central Texas crudes.

The Rycade Petroleum Corp. went into 27 feet of gyp and some rock salt in No. 1 Wisdom, east of the Damon Mound Pool, at 630 feet and is now drilling ahead at 685 feet. It is the first time the drill has proved the correctness of the Eotvos torsional balance, a description of which appeared in the July 24 issue of The Oil and Gas Journal in a special article. Some time ago the Rycade company tested that section of Brazoria County by the Eotvos torsional method, the readings indicating the presence of rock salt. The company secure options of some 20,000 acres in that vicinity and started the drill, with the results noted above. The salt area will be tested out and an effort made to define its limits and then tests for the oil sands that usually lie on one or more sides of the salt mass, will be made. Very little leasing has been done because all the surrounding acreage is tied up, but royalty buyers have been active and several land owners have sold fractional interests in the one-eighth reservation.

Eotvos and Seismograph

The presence of a sulphur water spring played a part in the decision of the officials of the Rycade company to follow the torsional balance readings with the drill. Last year, the Gulf Production Co. and the Atlantic Oil Producing Co. jointly located what is known as the Boling Dome in Wharton County and are now drilling their seventh test to define the salt area. Three years ago, the Gulf company and Snowden & McSweeney located the Big Creek Dome, 7 miles south of Richmond in Fort Bend County, and have developed some production around it. The presence of sulphur water springs and gas seepages led to drilling tests at both places. The Gulf Production Co. is now drilling a test near Sargent in Matagorda County on what is presumed to be a saline dome, the discovery of "paraffin dirt," being the clue that determined the test. The Marland Oil & Refining Co. has a location in the same county, south of Bay City, which will be tested. It is said the seismograph method of testing showed the presence of rock salt.

The Rycade Petroleum Corp., formerly known as the Amerada Co., has become one of the most active operators in the Coastal region and has extended its operations into the southwestern counties. It is drilling on State land in Cow Bayou on the east side of the Orange Pool, getting a 3,000 bbls. well in No. 4-E at 4,600 feet during the week and is now setting 25 feet of strainer in No. 2-E at 5,000 feet, after deepening it. In addition the company is drilling its third deep test at Spindletop, the first two being failures. It drilled two deep holes on the north side of the Jennings (La.) Pool this year, abandoning both as failures. The company is making a test southwest of production in Guadalupe County. It has accumulated a large acreage in the Gulf region, a portion of which is optional, its retention and development being conditional upon results as determined by either the Eotvos torsional balance or the seismograph method, commonly called the "dynamiter." Briefly described the latter method is as follows: From 250 to 300 pounds of dynamite is exploded in holes about 15 feet deep located around supposed saline domes. The tremors are recorded on the seismograph, the same as earthquake tremors. Experience has demonstrated that the tremors travel through a salt mass at least 10 times quicker than through shales, gumbo, gravel or other formations. Both the torsional balance and the "dynamiter" are now in use by the Gulf company, Roxana, Marland Oil & Refining, Rycade Petroleum Corp. and Atlantic Oil Producing Co. Tests by either apparatus are being made in every county in the Coastal region in Texas and the Louisiana parishes.

The companies are very secretive concerning the results of these tests, the Brazoria County tests being the first to be drilled behind the recording of one of these newly applied apparatus in the Coastal section.

Estimated Daily Average

The estimated daily average gross production for the week in the Gulf Coast Pools is placed at 84,400 bbls., an increase of 2,760 bbls. over the estimate for last wek. The estimate for the southwest fields is placed at 52,163 bbls., or an increase of 467 bbls. over last week. The estimate for each district is as follows:

District.	Gross Bbls.
Batson	1,580
Blue Ridge	700
Barber Hill	175
Dayton	95
Damon Mound	1,470
Edgerly (La.)	590
Goose Creek	12,250
Humble	8,120
Hull	21,500
Jennings (La.)	600
Markham	275
Orange	12,010
Pierce Junction	330
Spindletop	975
Saratoga	1,475
Sour Lake	4,500
Vinton (La.)	5,980
Welsh-Anse La Bute (La.)	90
West Columbia	11,825
*Miscellaneous	860
Total	84,400

*Includes Big Creek, High Island, Hockley, Nacogdoches, New Iberia (La.) and other places.

Southwest Fields—	
Luling	44,298
Laredo districts	4,225
Somerset	2,430
Calliham	640
Rockdale-Minerva	570
Total	52,163
Grand total	136,563
Grand total last week	133,836
Increase	2,727

Orange Pool Swells Total

Completions in the Gulf Coast pools during the week total 25, of which 11 are worked over holes. The new production aggregates 11,665 bbls., which is the greatest in any one week for several months. The unusual total is due to three late wells in the Orange Pool, which contributed 8,950 bbls. of the gross for the week. The dry holes number 3, salt water wells 3, with 8 tests drilling at the close of this review.

Completions in the Southwest fields number 8, but several are holdovers from late last week, coming in in the Laredo pools too late to be included in last week's summary. The new production is 1,275 bbls. The Luling Field has 500 bbls. and the Laredo districts 650 bbls.

In addition to the Rycade Petroleum Co.'s No. 4-E in Cow Bayou, already mentioned, that company's No. 2-E came in later flowing 3,600 bbls. at 4,997 feet. Both wells are flowing through chokers and both are making pipe line oil. No. 2-E is the deepest producer in the pool. The Gulf, Sun and Brownie Babbittee Oil Co.'s have holdings on the east side of these wells and several previous tests drilled to from 4,500 to 4,700 feet. Some of the old holes will now be sidetracked and deepened to the sands located by the Rycade Co. on its State Land leases in the bayou. On the west side of the stream, the Sun Oil Co.'s No. 5 Gunstream came in at about the same time as the Rycade Co.'s wells, flowing 2,000 bbls. with strainer set at 3,500 feet. The Gulf Production Co. abandoned No. 1 Hammam-Consolidated in the southern part of the pool at 4,600 feet. In other parts of the pool, the Edgerly Petroleum Co.'s No. 2 Carbello is a 100-bbl pumper, 50 per cent water at 4,275 feet. The Atlantic Oil Producing Co.'s No. 3 Hager-Moore will make a pumper at 3,325 feet, as will the Brownie Babbittee Oil Co.'s No. 9 McLean at 3,575 feet. All three are work overs.

The Rycade Petroleum Co. has a derrick up for No. 8 State Land. On the east side of the bayou, the Gulf Co.'s No. 2 Hager fee is deepening at 3,600 feet. The Tiller Oil Co.'s No. 2 State Land is drilling around 2,890 feet. The Gulf Co. has a location for No. 2 Hammam-Consolidated. No. 16 Hager fee is at 3,380 feet. No. 5 Winifree is drilling around 3,610 feet and No. 11 Hager-Moore at 4,070 feet. The Brownie Babbittee Co. is sidetracking No. 2 Brown in the southeast extension at 4,450 feet. The Humble Oil & Refining Co.'s No. 5 Winifree is around 2,415 feet. No. 19 Chesson is sidetracking. The Mutual Oil Co.'s No. 2 and 3 Chesson are working over. The Orange Petroleum Co.'s No. 3 Winifree is rigging. The Sun Oil Co.'s No. 1 Kato, northeast part of the pool, is around 4,300 feet sidetracking. The American National Oil Co.'s No. 1 Winifree, 1 mile northeast of production, is reaming at 4,660 feet.

Hardin County Pools

In the Batson Pool, two nice wells were made in the old shallow sand section. The Ada Belle Oil Co.'s No. 77 Texas is pumping 25 bbls. at 325 feet and the Paraffine Oil Co.'s No 57 fee 20 bbls. at 350 feet.

The Ada Belle is rigging No. 78 Texas and W. B. Flynn has a location for No. 1 Donohoe. The Kirby Petroleum Co.'s No. 2 Hodges, the deep sand well, is shut down. The East Batson Oil Co.'s No. 7 Allen is drilling around 785 feet, the Duester Oil Co.'s No. 9 Trustee at 965 feet and the Sun Oil Co.'s No. 73 Paraffine at 780 feet. S. R. Buchanan is fishing in No. 77 Milhome. Campbell & Borum's No. 2 Hooks is shut down.

In the Saratoga Pool, the Rio Bravo Oil Co.'s No. 211-B is pumping 40 bbls. at 815 feet. No. 2-P is a saltwater hole at 1,905 feet. Paggi Brothers' No. 42 Queen is pumping 5 bbls. at 1,140 feet. The Gulf Production Co.'s No. 22 BBBC is bailing at 1,350 feet.

The Sun Oil Co.'s No. 170 Fee is drilling below 765 feet. Paggi Brothers No. 4 Lewis is idle. The Rio Bravo Oil Co.'s No. 39-B is rigging.

In the Sour Lake Pool, The Texas Co.'s No. 288 Fee is wroking over at 2,280 feet and the Gulf Production Co.'s No. 26 Tarver-Hardin is drilling at 2,024 feet. The Humble Oil & Refining Co.'s No. 38 Hardin is at 2,366 feet. The Sun Oil Co.'s No. 58 Bass & Eastham is drilling around 765 feet. The Minor Oil Co.'s No. 73 Hardin is rigging, as is J. H. Antilly's No. 2 Rio Bravo.

Liberty County Pools

In the Hull Pool, the Mecom Oil Co.'s No. 4 Mecom, which came in last week and flowed as high as 2,500 bbls. per day, is now averaging 1,400 bbls. Same company's No. 6 Mecom is drilling below 3,790 feet and No. 7 is rigging to start. The Houston Production Co.'s No. 8 Barngrover is flowing 475 bbls. at 3,170 feet. The Gulf Production Co.'s No. 33 Phoenix is flowing 100 bbls. at 3,350 feet. The Republic Production-Houston Oil Co.'s joint No. 20 Dolbear is bailing at 2,775 feet.

On the north side of the dome, the Yount-Lee Oil Co.'s No. 10 Merchant is rigging. Humble Oil & Refining Co. has a derrick for No. 3 Merchant. The Gulf Production Co.'s No. 13 Scarborough is drilling at 975 feet. No. 7 Scarborough is working over. On the east side, the Republic Production-Houston Oil Co.'s No. 13 and 70 Dolbear are working over. No. 87 Dolbear is deepening at 2,710 feet and No. 88 Dolbear is drilling around 3,386 feet. On the southeast, the Gulf Co.'s No. 6 Thomas is deepening at 3,415 feet. Nos. 13, 16 and 36 Phoenix are being worked over. On the south side, the Humble Oil & Refining Co.'s No. 10 Hooks is drilling at 655 feet. The Houston Production Co. is rigging No. 12 Barngrover. On the southwest, The Texas Co. and Vacuum Oil Co.'s joint No. 3 Hannah is drilling at 2,495 feet. On the west side, the Humble Oil & Refining Co.'s No. 1 Hannah is around 3,295 feet. The Higgins Oil & Fuel Co.'s No. 2 Taylor is at 1,975 feet. The Red Cantor Oil Co.'s No. 3 Cantor on the northwest side, is drilling around 400 feet.

Harris County Pools

In the Humble Pool, the Galena-Signal Oil Co. of Texas' No. 41 Stevenson is making 250 bbls. on air. No. 42 is setting liner to try and shut off the salt water. Morris & Co.'s No. 2 Morris is making salt water and some oil. It will be put on air.

The Webb Oil Co. is drilling No. 25 Cherry, J. M. Hester No. 68 Hermann and J. E. Rateliff No. 22 Crow.

In the Goose Creek Pool, the Goose Creek Oil Co.'s No. 5 Freeman in the bay is pumping and flowing 325 bbls. at 2,775 feet. The Gulf Production Co.'s No. 19 Smith is pumping 50 bbls. at 2,550 feet and No. 5 Chapman-Bryan 25 bbls. at 4,250 feet, both being worked over holes. The Sun Oil Co.'s No. 8 Bartlett-Smith is bailing at 2,890 feet. The Humble Oil & Refining Co. abandoned No. 59 Smith and is putting No. 26 Sweet on the power to pump at 4,475 feet.

In the bay waters the Gulf Co.'s No. 26 Beaumont is drilling at 3,354 feet, No. 29 Beaumont at 3,080 feet. No. 11 State Land at 2,185 feet and No. 3 Hirsch at 3,765 feet. No. 2 State in San Jacinto Bay is rigging. A location has been made for No. 4 Hirsch. On the land No. 3 H. Galliard is deepening and No. 21-A Wright is below 776 feet. The Humble Oil & Refining Co.'s No. 14 on the peninsula is working over. No. 51 Galliard 25 acres is drilling around 4,325 feet. No. 56 Smith is at 3,435 feet. No. 11 Tabb is drilling around 1,415 feet.

The Gulf Coast-United Central Oil Co.'s No. 28 Galliard is at 2,875 feet. The Inca Petroleum Co.'s No. 4 Duke is below 3,000 feet and Allen & Marshall's No. 1 Gillette is at 2,025 feet. The Copeland Oil Co. is rigging No. 6 Bryan at the mouth of Goose Creek and the Hisgen Petroleum Co.'s No. 2 Busch, northwest of production, is fishing at 2,665 feet.

At West Columbia, The Texas Co.'s

(Continued on Page 102)

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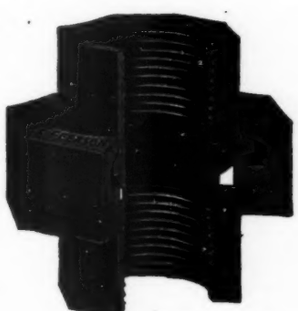

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Wyoming Field Operations

By F. B. Taylor

Sunburst Oil & Refining Co. gets 1,500-bbl. well and one of 400 bbls. on Corey lease. Four wells drilling and one new location at Lake Basin Dome, where discovery well is still shut in. Wells at Craig, Colo., nearing interesting depths. Wellington gasser fire not yet under control.

CASPER, Wyo., Augu. 2.—Sunburst Field has another big producer on Section 4-32-2, where all the other big wells have come in the past month. The new well is known as the Sunburst Oil & Refining Co.'s on the Corey and the original lease was turned over to the Sunburst Field by J. A. Johnson and others of Shelby who retained an interest in the property. Mr. Johnson is mayor of Shelby, and was reported hard hit financially when he and others guaranteed the Dempsey-Gibbons prize fight. The new well is said to have put the mayor's finances back in better condition than ever.

This well found the Ellis sand at 1,526 feet and is only into the pay a few feet. It is estimated at 1,500 bbls. daily and will be pumped as the gas pressure seems to be going off in that part of the field. A battery of tanks and a string of 3-inch tubing is being placed while the well is shut in at present.

The reduction of 25 cents in the market price of most of the Rocky Mountain crudes did not extend to Sunburst; this field was reduced only 7 cents bringing the present quotation to 98 cents per barrel. The Tip O'Neil interests which have a skimming plant at Sunburst are paying a 10-cent premium over the market quotation for crude. This plant is handling about 3,000 bbls. daily.

Fighting Wellington Fire

In the Colorado fields, the interest is now centered in the burning gas well of the Union of California at Wellington. The fire crew has been equipped with asbestos suits and three attempts have been made to blow out the flames with explosives. All three failed. Wire cables stretched across the flame were melted in a few moments. The fire fighters were considerably bothered for a time because of some of the broken steel parts of the big gate and casinghead that were lying close to the hole and these became red hot so that even had the flames been blown out at first the well would have caught again from the heated iron.

It is now planned to place boilers and try steam on the burning well. Another plan being put forward by some of the officials is to use a funnel that would cause the flames to burn high in the air and thus allow workers to approach the hole and prepare a closure.

The Union of California now has six wells drilling in Colorado. A third well is drilling on the Wellington structure besides the two that are in now. There is one drilling on the Fort Collins structure and one each of the Vermejo, Columbia Heights and Elk Springs structures, while a location has been made and a well is to be started in the near future on the Devil's Hole Dome. The Union is also interested in the Coles structure and is examining several other areas in Colorado for possible oil structures.

Wyoming Crude to Atlantic

Wyoming crude is now going to Houston, Tex., and then by tanker to Philadelphia where it is being refined in the refinery of the Atlantic Refining Co. Recently a contract was made between the Atlantic Refining Co. and the Sinclair interests by which the Atlantic will take 7,000,000 bbls. of Wyoming oil for treatment at its eastern plants. This oil is now all in storage at Clayton tank farm, about 28 miles east of Casper and it consists of the Teapot Dome oil and the royalty production of the Government that the Sinclair interests purchased and which comes as the Government's share from wells on Government lands in the Salt Creek Field.

This oil is now going to Kansas City through the trunk line of the Sinclair and at that point it is sent through the Sinclair's line to Houston where it is sent through the Sinclair's line to Houston where it is transferred to tankers for the trip around Florida and up the Atlantic coast to Philadelphia. It would also be possible to have sent the crude through the Sinclair pipe line to Chicago and then by other trunk lines to the Atlantic coast, but this would have meant transportation tariffs over the lines of the other pipe line companies and the Sinclair officials decided that it would be cheaper to send the oil to their own tankers at Houston than to pay transportation charges over other lines.

The contract between the Sinclair and the Atlantic Refining Co. calls for 7,000,000 bbls., but the officials of both companies are reported to be well pleased with the terms and it is expected that a renewal will be had when the terms of the present contract are fulfilled. The oil is practically the same as the Pennsylvania oils that the Atlantic's plant has been using in the past and there is no change needed in the plant's construction to run the Wyoming crude.

This also gives the Sinclair a good outlet for much of the crude that has been accumulating in the tanks at Clayton and reduces the evaporation losses that attend the storage of crude oil at the high altitude in the Rocky Mountain region. The oil will be shipped about 1,350 miles through pipe lines and then about 2,300 miles by water, or nearly 4,000 miles to reach its destination. This is the first shipment of crude from the Rocky Mountain fields that is to be refined on the Atlantic Coast.

The E. T. Williams Oil Co. has issued a report of the financial condition of the company and its operation for the past two years. The net current assets amount to $1,254,924 and the net surplus and working capital is $724,921. The president's report states that The Texas Co. does not own any controlling interest in the company although when the Williams Co. sold a half interest in some of its Salt Creek leases to The Texas Co. it was generally thought that The Texas Co. had obtained control of the Williams.

Towns to Drill

The inhabitants of Polson and Pablo, two towns in the western part of Montana consider that their territory is worthy of entering the petroleum producing areas and to this end, a syndicate has been formed of men in the two places, some 17,000 acres of land has been leased and a rig and string of standard tools has been built and started drilling. The test was spudded in last week and the start was celebrated with a sports program and general picnics of the inhabitants. The prizes in the contests were royalties on different tracts and the whole countryside turned out to make the occasion a gala affair.

The well is located between the mountain ranges that form the Continental Divide in western Montana and is near the Flathead Lake that is one of the largest bodies of water in the Rockies. The country is a beautiful valley hemmed in by high peaks covered with the eternal snows and would be a charming place to operate if oil is found.

Sunburst Field

In the Sunburst Field of Montana, the Seattle-Foster wildcat has been spudded in. This location is on Section 12-35-1 and constitutes a test of an area well on the outside of the known area of the field. Should the well come in a producer it will extend the field to the northeast about 7 miles.

The Potlatch Oil Co.'s well on the Adams lease is now down about 3,100 feet and is making a deep test of the northeast part of the field. Its location is Section 21-35-1 and the well is prepared to go 4,500 feet unless commercial production is found. The drilling of wells at Sunburst continues lively in spite of the cut in crude.

The Sunburst Oil & Refining Co.'s well on the Corey lease on Section 4-35-2 that holds the big wells recently drilled in on the southern part of the field, reached the Ellis sand and found a producer good for 400 bbls.

The Sunburst Co. also found production on Section 29-35-1 in the Ellis sand at 1,463 feet on the Anderson tract and has a small producer, but the drilling is being continued to pass through the sand before stopping.

Lake Basin

In the Lake Basin development in Stillwater County, northwest of Billings, the Midwest is drilling at various depths on four wells and has another located. The discovery well is shut in and nothing exciting is expected until some of the drilling wells reach the sand which will be September or later. The Midwest recently paid $13,000 to a group of lease holders on Section 36-1-21 which constitutes the first payment of $20,000 as agreed between the leasers and the Midwest.

In Wyoming the Marland Oil Co. has closed for some leases on Section 2 and 4-37-85 in the Notches Field in Natrona County. The company has made a location and has a rig on the ground there. The Midwest has a producer there that has been fishing for some pipe for some months past. There is a pipe line to Lex station on the Burlington Railroad through which the Midwest has sent its production for refining at Casper. The crude is used mainly in the manufacture of asphalt. The Midwest found its production at 1,590 feet.

The Big Sioux Oil Co. is drilling a wildcat near Irvine in Converse County and the hole is about 700 feet on Section 2-31-70. In Laramie County, the Midwest Refining Co. is about 850 feet in the well on the Jordan ranch.

Medicine Bow

The deep well on the Producers & Refiners in Carbon County, south of Medicine Bow, is shut down while the rig is being repaired. The hole is now at 5,440 feet and drilling is to be resumed in a week.

The deep test of the Midwest Refining on the Neiber Dome in Hot Springs County is drilling at 4,040 feet and no sand yet. The drillers have been expecting sands since passing the 3,500-foot level.

The wildcat of the Mutual Oil Co. on the Wallace Creek Dome in Natrona County has sidetracked the 20-inch bit that held back the work and the hole is now about 500 feet. The sands are expected about 3,500 to 4,000 feet.

The Midwest wildcat on the Tisdale Dome, west of the Salt Creek Field about 10 miles is drilling at 800 feet and in the big hole. This well is expected to make a test of the Embar and Tensleep sands, never drilled to in the Salt Creek Field.

In the Craig Field in Colorado, The Texas Co., the Hogan interests and the Transcontinental wells are reaching interesting depths and completions may be looked for in the near future.

Runs From the Fields

Salt Creek	87,500
Teapot	2,700
Big Muddy	2,900
Grass Creek	3,350
Elk Basin	1,115
Greybull	45
Byron	60
Rock River	1,060
Lance Creek	3,110
Poison Spider	650
Osage	305
Hamilton Dome	950
Mule Creek	550
Lander	375
Pilot Butte	70
Lost Soldier	5,730
Ferris	135
Rex Lake	390
Cat Creek	4,125
Sunburst	4,290
Craig	4,575
Miscellaneous	645
Total	126,590

Kansas Oil Field News

By C. D. Lockwood

The most important new pool in Kansas, locally known as the Rainbow Pool in Township 33-3e, Cowley County, produced last week about 7,200 bbls. a day from 8 wells.

The Waite Phillips Co., Marland Refining Co. and Independent Oil & Gas Co.'s No. 2 Wortham, SE cor. NW Section 20-33-3 was good for 800 bbls. from sand at 3,188 to 3.216 feet. The same companies' No. 3 Wortham, SW cor. SE NW, Section 20, started at 475 bbls. from sand at 3,215-42 feet. Their No. 3 Johnson, SW cor. NW SE, Section 20, opened up at 2,400 bbls. a day from sand at 3,201-27 feet. Their No. 2 Glasgow, SE cor. NE SW, Section 20, flowed 1,700 bbls. a day from sand at 3.196 feet, drilled in 15 feet. No. 3 Glasgow, NW cor. NE SW, Section 20, flowed 755 bbls. a day at 3,199-3,213 feet.

The Alcorn Oil Co.'s No. 1 Graham, C NE NE NE, Section 9-33-3 was flowing 38 bbls. an hour from sand at 3,513-18 feet, when it was shut in to await a liner.

The Lewis Oil Co.'s No. 2 Robbins, SE cor. SW SE SW, Section 31-30-6, Cowley County, found 10,000,000 feet of gas at 2,844-53 feet and in the next 3 feet found oil and water. It was making 300 bbls. of oil and the same amount of water. It is not a completion.

The Southwestern Petroleum Co.'s No. 5 Eastman, NE cor., Section 6-31-6, Cowley County, was showing a production of 12 bbls. an hour from sand at 2,860-80 feet. It had a 4,000-foot gas production at 2,828-60 feet. No. 6 Eastman, NW cor. NE, Section 6, was a 300-bbl. well at 2,867-68 feet. It had a 15,000,000-foot gas production at 2,832-67 feet.

The Watchorn Oil & Gas Co.'s No. 1 Keethley, NW cor. NE NE, Section 36-32-4, Cowley County, got the top of the sand at 3,100 feet; oil chat at 3,104-06, and water at 3,106-08 feet. It filled up 3,000 feet with oil in four hours, and produced 45 bbls. of oil and 200 bbls. of water in 13 hours. It is not a completion.

The Southwestern Petroleum Co.'s No. 1 Allen, SE cor. SW NE, Section 18-32-6, was a hole full of water at 3,475 feet and plugged back to 3,141 feet but only a 7-bbl. production with some water

(Continued on Page 118)

One 160 H. P. and two 80 H. P. Cooper gas engines in East Ohio Gas Co.'s Shreve, Ohio, plant.

Peoples Natural Gas Company Again Chooses Cooper Engines

The Peoples Natural Gas Co., a subsidiary of The Hope Natural Gas Co., of Pittsburgh, installed their first single acting Cooper gas engines early last year. After comparing these units with engines of other makes for over a year, they have recently purchased three additional Cooper 160 H.P. compressor units. Two of these engines are to be additions to plants now in existence. The third one is the first unit for a new station.

We do not know that their comparison showed a better fuel economy for the Cooper four cycle units. We are not sure that they found the simple yet sturdy Cooper engines more reliable and less troublesome than some of the complicated designs of other makes. We only know that their recent choice of Cooper engines was made on merit and as such it should be the best possible guide for anyone who has not had an opportunity to compare Cooper engines with other makes.

The C&G COOPER CO.

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California Field Operations

By L. P. Stockman

Torrance production stable although only few large wells brought in during past month. Chanslor-Canfield-Midway No. 67 Torrance makes 960 bbls. and Sentinel Co.'s No. 10 Torrance 940. At Long Beach Shell Co.'s No. 17 Alamitos is 1,360-bbl. producer. Union Co.'s No. 5 Hellman, Dominguez, 2,300 bbls.

LOS ANGELES, Calif., August 2.—The daily production at Torrance has remained quite stable during the past month, notwithstanding that only a few really large wells were brought in. The completion of several small wells and the recompletion of many former producers which had sanded up offset the normal decline to some extent. The Chanslor-Canfield Midway Oil Co. put two wells on production during the past week, carrying off completion honors and incidentally increased its production 1,300 bbls. No. 67 Torrance, the banner well for the week, is listed as a 960-bbl. producer of 26.8 gravity oil which shows a cut of 1 per cent. It was drilled to 3,700 feet and finished with a 6¼-inch oil string, including 390 feet of standard slotted. No. 58 on the same lease came in flowing 340 bbls. from 3,720 feet. The oil was of a higher gravity than from No. 67 and tested 27.2 degrees. The Chanslor-Canfield Midway Oil Co. had several additional wells on the Torrance lease nearing completion, a few of which should be brought in during the next two weeks. The company is running the oil string in No. 2 Dominguez and it, too should be taking oil within a short time.

The Sentinel Oil Co. finished one new well during the week but it was only slightly smaller than the Chanslor-Canfield Midway Oil Co.'s record producer, No. 67 Torrance. The Sentinel's No. 10 Torrance, drilled to 3,829 feet and finished with a 6¼-inch oil string, including 310 feet of 60-inch screen, registered 940 bbls. during the first 24 hours. The oil, which is clean and tests 20.7 degrees, is flowing through a ½-inch bean under a pressure of 350 pounds.

Shell Co. Work

The Shell Oil Co., in addition to putting two new wells on production, has several others in various stages of completion. On the Scarborough lease, the Shell secured a 386-bbl. well when No. 3 was turned loose from 3,860 feet after being finished with an 8¼-inch liner, including 350 feet of 50-mesh screen. The oil, which is clean and tests 21.2 degrees, is flowing through a ½-inch bean under a pressure of 460 pounds. No. 2 on the same lease started off flowing 250 bbls. of 20.8 gravity oil. Centrifuge cuts of the oil showed 18 per cent water and 2 per cent sand. The water content is believed to be due in a large extent to rotary fluid and for this reason a slightly better production is expected when the well cleans itself out. No. 2 Scarborough, which is flowing under a pressure of 460 pounds, was drilled to 3,870 feet and finished with an 8¼-inch liner, including 357 feet of 50-mesh screen. A water shutoff was not secured in No. 1 Scarborough and as a result it will not be completed for another week or so. Nos. 4, 5 and 6 on this same property look like completions within two or three weeks. The company is bailing No. 3 Bluemle and is running an oil string in No. 4. Nos. 5, 6, 7, 8 and 9 are standing cemented and indications point to probable completions within three or four weeks. On the March lease the company is preparing to run a string of 8¼-inch in No. 7. No. 8, completed at 3,860 feet, cleaned up after a week's flow and is doing 420 bbls. of clean 18.5 gravity oil. No. 4 Kettler, which sanded up following its completion a short time ago, is being cleaned out, while No. 12 has been plugged back from 3,880 feet to 3,854 feet. Upon being put on the beam the latter pumped 90 bbls. of 18.4 gravity oil which cut 3 per cent. Nos. 13 and 14 proved to be somewhat disappointing and are pumping to sump.

Standard's Operations

The Standard Oil Co. put four wells on the beam but none was of any consequence. No. 7 Marble lease, on the pump, was good for 140 bbls. of 21.4 gravity oil which showed a cut of 2 per cent. It was drilled to 3,810 feet and finished with a 6¼-inch oil string, including 285 feet of 60-mesh screen. No. 1 Dominguez was a cleanout job at 3,800 feet, following its sanding up several weeks ago. Upon being put on the beam during the early part of the week, it pumped 130 bbls. of 16.3 gravity oil, which is cutting approximately 20 per cent. From a 750-bbl. flowing well, No. 1 Dominguez has dropped to a 130-bbl. pumper. Nos. 2, 3 and 4 on the same property have also registered declines and are now averaging about 200 bbls. on the beam. Nos. 5 and 6 were brought in following the recompletion of No. 1 Dominguez but they both resulted in pumping wells. The former, drilled to 3,847 feet and finished with an 8¼-inch oil string, including 291 feet of 60 mesh screen casing, was good for 190 bbls. of clean 17.5 gravity oil. No. 6 Dominguez, finished at 3,862 feet, registered an initial pumping of 182 bbls. of 17.4 gravity oil, which showed a cut of 1 per cent. The Standard should finish Nos. 7, 8 and 9 on the Dominguez lease within the next three or four weeks. No. 3 Sentinel-Joughin is being prepared to be put on the pump, while Nos. 5, 6, 7, 8, 9 and 10 are making good footage and, barring unforseen delays, should be on production within the next 60 days. The Superior Oil Co. finished three wells on its Torrance property with various degrees of success. No. 41, completed at 3,811 feet and finished with a 6¼-inch oil string, including 293 feet of 60-mesh screen, was good for 645 bbls. on its initial test. The oil, which is flowing through a ½-inch bean under a pressure of 580 pounds, tests 20.8 degrees and shows a cut of 2 per cent. No. 37 Torrance, a 70-bbl. pumper of 16.4 gravity oil, was drilled to 3,785 feet and finished with a 6¼-inch oil string, carrying 204 feet of 60-mesh screen. No. 39 Torrance was finished at 3,789 feet but was not completely rigged up and consequently not put on the pump. In addition to these completions, the company is drilling on this same lease Nos. 24, 28, 40 and 44, all below 3,500 feet.

Long Beach

The past week was a rather profitable one for the Shell Oil Co. at Long Beach, since two new wells were put on production with an aggregate initial output of 1,910 bbls. No. 17 Alamitos, a good producer from 4,601 feet, was by far the best well finished. It was completed with a 6¼-inch oil string, including 565 feet of 60-mesh screen and made 1,360 bbls. on the usual production test. The Oil, testing 22.6 degrees and showing a cut of 1 per cent, is flowing through a ⅞-inch bean under a pressure of 600 pounds. No. 3 Hutton, drilled to 4,957 feet and finished with a 4¼-inch liner carrying 1,178 feet of 60-mesh screen casing, was good for 550 bbls. of 28.5 gravity oil. The output showed a cut of 12 per cent but it is believed this will eventually be reduced. The A. T. Jergins Trust, by completing No. 10 Municipal, on land leased from the city of Long Beach, increased its production 675 bbls. a day. The well was drilled to 4,800 feet and completed with a 6¼-inch oil string landed at 4,798 feet. The oil, which is clean and tests 22.5 degrees, is flowing through a ⅞-inch bean under a pressure of 450 pounds. A string of 6¼-inch was landed in No. 12 on the same property at 4,890 feet and indications point to a good well. No. 13 is drilling ahead in a hard sand at 3,955 feet. The Marine Oil Corp. finished No. 16 at 5,000 feet and No. 23 at 5,300 feet. It is believed the former will be put on a test during the coming week. The latter has been swabbed for several days but is having some difficulty in getting under way. Original plans called for the completion of No. 17 at 4,758 feet but the company decided that it would be advantageous to drill deeper and the well now shows 4,801 feet of hole, with the 5,000-foot level as the expected completion depth. The Dabney Oil Syndicate completed a shallow producer and a small well when No. 24 was brought in from 3,511 feet. The maximum output of this upper zone producer was 200 bbls., the oil testing 18.1 degrees and showing a cut of 15 per cent. It was expected that the Henderson Petroleum Syndicate would have completed No. 1 Malloy during the past week at 3,948 feet. The 6¼-inch oil string, however, while being run in, stuck at 2,990 feet and 1,075 feet of 4¾-inch liner was put in. With the hole in this bad shape the well refused to flow and it is at present being rigged up for the pump.

Santa Fe Springs

As the result of a decrease in development work during the past several months at Santa Fe Springs, only a limited amount of drilling is being done, which has been reflected in a decrease in the number of new wells finished. There were only two recompletions and one cleanout job reported during the past week. George F. Getty's No. 2-A Hill was recompleted after being plugged back from the Meyer zone at 4,686 feet to the Bell zone at 3,889 feet. The 6¼-inch was perforated between 3,660 feet and 3,875 feet. When put on the beam, No. 2-A Hill pumped 50 bbls. of 29.1 gravity oil, which showed a cut of 2 per cent. Getty has so far plugged back five of his producers from the Meyer to the Bell zone, the remaining 10 or so averaging about 150 bbls. a day from the former. The General Petroleum Co. cleaned out No. 12 Santa Fe to the bottom of the hole at 4,603 feet and secured a 15-bbl. pumper of 29.8 gravity oil when it was returned to production. Schaff & Noble's No. 1-A Wardman proved to be the best completion recorded for several weeks. After producing for some time from 4,502 feet the well suddenly stopped due to the practical exhaustion of the Meyer sand at this point. It was deemed advisable to plug back and try out the Foix sand passed up entirely when the well was originally drilled to the deep sand for large production. It was accordingly plugged from 4,502 feet to 4,100 feet and the 6¼-inch perforated from 3,525 feet to 3,550 feet to take care of the Foix sand. It came in a flowing well and tanked 660 bbls. of unusually clean 25.7 gravity oil during the initial test. A 1-inch bean was used and a pressure of 200 pounds built up. The Shell Oil Co.'s No. 6-A Slusher, which is being carried down for a deep sand, has reached a depth of 6,040 feet. The formation at present is a sandy shale but a core taken during the early part of the week revealed no showings of any kind.

Huntington Beach

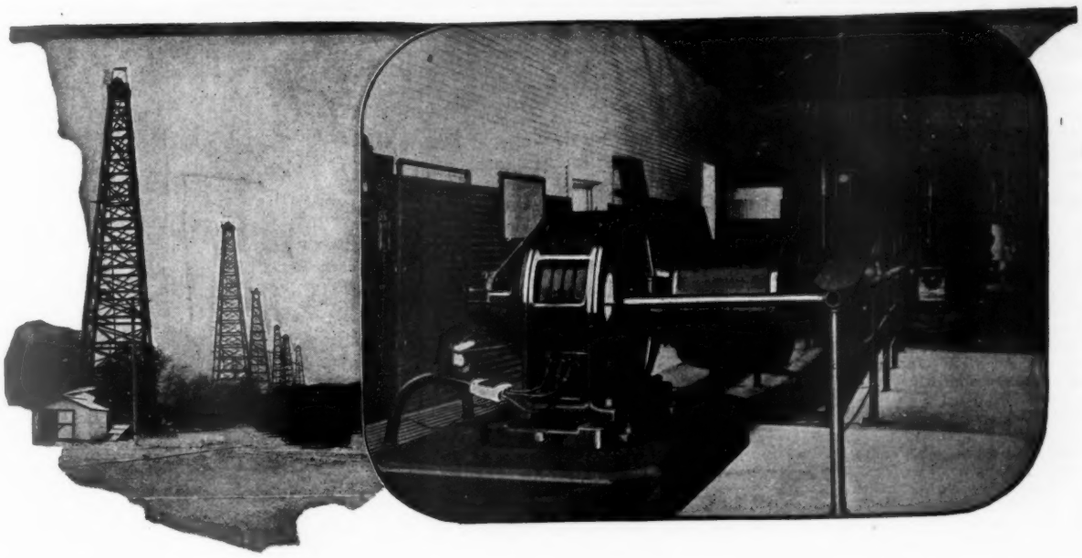
There were four wells put on production in the Huntington Beach Field during the past week, nearly all, however, small and rather unsatisfactory. The Olig Crude Oil Co., after drilling No. 2 to 4,700 feet, plugged back to 3,650 feet and secured a 50-bbl. well. About 25 per cent of the output was water and some additional work will be necessary. The Rhoades Oil Co. resumed work on No. 4 after an idleness of several months and put it on the beam. It pumped 100 bbls. of fluid,

(Continued on Page 98)

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Following is a list of tankers, date departed, destination, kind of cargo and amount in barrels:

Shreveport, July 21, Boston, crude	74,778
J. A. Moffett, Jr., July 23, New York, crude	110,066
William Rockefeller, July 24, New York, crude	131,464
Bethelridge, July 24, New York, crude	74,618
Hagood, July 25, Boston, crude	77,024
Samuel Q. Brown, July 26, New York, crude	73,901
Aladdin, July 26, New York, crude	77,921
Tulsagas, July 26, New York, crude	65,992
Coastwise	
Atlas, July 22, Hueneme, refined	15,110
Charlie Watson, July 22, San Diego, refined	16,951
Frank G. Drum, July 23, Avon, crude	70,452
W. S. Miller, July 23, Richmond, crude	73,477
Montebello, July 23, Martinez, crude	76,171
La Purisima, July 23, San Diego, fuel	30,369
Charlie Watson, July 24, Richmond, refined	13,035
Atlas, July 24, Hueneme, refined	16,707
La Purisima, July 26, Portland, refined	51,453
W. S. Miller, July 27, Richmond, crude	74,817
Exports	
Semiramis (Dutch), July 21, Japan, fuel	55,443
Scottish Strath (Br.), July 23, England, refined	72,987
Cardita (Br.), July 23, Japan, fuel	60,171
Tamaha (Br.), July 23, Singapore, refined	61,501
Natica, (Br.), July 24, China, refined	58,886
G. Harrison Smith (Br.), July 24, Chile, fuel	128,380
Melpomene (Fr.), July 25, Balboa, refined	72,768
Shiriya (Jap.), July 27, Japan, fuel	60,336
San Felix (Br.), July 27, Buenos Aires, fuel	119,806
From San Francisco	
Kewanee, July 21, Los Angeles, refined	16,730
S. C. T. Dodd, July 22, Willbridge, refined	76,498
Ampularia (Br.), July 22, China, refined	61,855
Los Alamos, July 23, Portland, refined	43,760
Lebec, July 23, Portland, fuel	69,584
Kewanee, July 25, Linnton, refined	28,637
Tachibana Maru (Jap.), July 26, Japan, fuel	57,023
Kanju Maru (Jap.), July 27, Japan, fuel	71,466
Oleum, July 27, Eureka, fuel	31,464
From Port San Luis	
Coalinga, July 21, Oleum, fuel	73,714
Coalinga, July 26, Oleum, fuel	72,568



Electric motor drive is the most economical for casinghead gasoline plants

Most casinghead gasoline plants are now driven by gas engines, using residue gas for fuel. Engine troubles, however, are found to be the cause of a big loss in gasoline production, more than offsetting the cost of electric power for motor drive. Speed variation also reduces output.

A Los Angeles plant replaced three 200 H.P. gas engines with three 200 H.P. slip-ring induction motors. The average shut-downs of four days per engine per month were eliminated, which more than paid the monthly power bill. In addition, the steadier speed at which the compressors were driven increased materially the daily production. The operating company was convinced of the advantages of electric drive and the entire lease was soon electrified.

Motor drive for vacuum pumps is even more necessary than for compressors. These pumps must be operated continuously at a fixed speed or the neighboring lease will profit by your loss. Any shut-down means a production loss of from 10 to 18 hours, the time required to again build up a vacuum.

The G-E oil well specialist in your district will gladly explain to you the advantages of electric drive for vacuum pumps, compressors and circulating pumps for casinghead gasoline plants and also for oil wells. Technical paper 503 mailed on request.

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Fields of the Central West

By Whit

Aetna Drilling Co. and W. C. H. Co. each get 75-bbl. wells in Payne Field, Paulding County, Ohio, and U. S. A. Oil Co. 60 bbls. Arkansas Fuel Oil Co. gets 140-bbl. well in Wabash County, Illinois; Adams Corner Co. 130 bbls. flush; Coons Creek Co., 80 bbls.; Ohio Co., 80 bbls. in Wayne County, Ohio.

FINDLAY, Ohio, Aug. 4.—There does not appear to be much of a letup in development work in parts of the Central West Field. Numerous new locations were made in the Central Ohio Field and the old Lima Field had its share of new completions. Illinois also comes to the front with some good producers, found in the Wabash County Field. Indiana and Eastern Kentucky were quiet.

With a slight advance in the price of crude, or assurance that the present price of Lime crude would stay stationary, there would be new work in the Northwestern Ohio Field, as the extensions made during the past year or so, has been productive and open up large areas for development.

Just now the new Payne Field in Paulding County has the lead in good wells, while the Shelby County Field is becoming more attractive each day, and the finding of oil in commercial quantities near the town of McGuffey, in Harlin County, means that county will get its share of the new work.

Paulding County

The new Payne Field of Paulding County is coming rapidly to the front and is being recognized by the trade after a few months of diligent test work. It is safe to say the success of the Aetna Drilling Co., in its well No. 1 on the Thomas Lamb farm, Section 32, Harrison Township, will be the beginning and cause of the field extending to the city limits of both Antwerp and Paulding. This well is about 2 miles northeast of the nearest production. The Lamb well, just north of Payne, struck the top of the Trenton at 1,403 feet and drilled 44 feet in, to a total depth of 1,447 feet. A heavy flow of gas was found at 20 feet in the sand, and when striking the oil pay, the hole filled to a depth of several hundred feet. The well was given a 100-quart shot, the first to be made from the magazine of the Agnew Torpedo Co., recently located in the field, and was in charge of Fred Cunningham, an old-time shooter. The shot increased the already large gas flow, although not heavy enough to flow the oil into tankage. Tubing was immediately put in and a line laid to a 250-bbl. tank that had been erected, and a trial pumping made. The well is reported as a 75-bbl. producer, but could have put double that quantity of oil in tanks in a 24-hour gauge. The Buckeye Pipe Line Co. has arranged to extend its gathering line to the new well, and the first tank car of oil will be shipped as soon as the well is connected to the gathering line.

Highest of Trenton

To add to this happy occasion the W. C. H. Oil Co. of Washington Court House, Ohio, completed its No. 1 the same day on the Conrad Yearling farm, Section 4, Benton Township, Paulding County. This well found the top of the Trenton at the highest point of any well so far drilled in the Payne area—1,399 feet, and drilled to a total depth of 1,499 feet. This well was given a shot by Shooter Cunningham of 140-quarts and responded nicely, and also good for around 75 bbls. The U. S. A. Oil Co.'s No. 2, on the William King farm, Section 4, Benton Township, is reported doing 60-bbls. daily.

W. H. Cramer of Wooster, Ohio, has been spending several days in the Payne Field and was so impressed with the outlook he secured the Brady Building, together with trackage at the east end of Payne, on the Nickle Plate Railroad for the Jarecki Manufacturing Co., and a stock of oil well supplies will be moved in at once.

The next completion due in the Payne Field is the Harmon-Miller-Lyons Co.'s No. 2 on the Clara Graham farm, Section 4, Benton Township. Following this will be the J. W. McIntosh's No. 1 Brady Brothers' farm; Boston & Southwestern Oil & Gas Co.'s No. 1 John Bachellor farm; Smithers & Stevens' No. 1 Charles Baumert; Robinson & Mandell's No. 1 William Wood farm; Aetna Drilling Co.'s No. 2 Thomas Lamb farm, Section 34, Harrison Township, and the Washington Court House Oil Co.'s No. 2 Conrad Yearling farm, Section 4, Benton Yearling farm, Section 4, Benton Township.

Hardin County

One of the coming areas to attract attention is in the vicinity of McGuffey, in Hardin County, where the hunters for natural gas have brought about the opening of an oil field worth while. There are three townships in this county being tested out for both oil and gas. They are McDonal, Roundhead and Marion. In the first, the Rounhead Oil & Gas Co.'s No. 4, on the Erwin Hiter, struck top of Trenton at 1,453 feet and drilled 41 feet in, to a total depth of 1,494 feet, the well producing 30 bbls. In the same township, the Cockley Oil Co.'s test on the George Greentree, struck top sand at 1,446 feet and drilled 45 feet in to a total of 1,491 feet, the well showing a production of 35 bbls. Whipple, Ulrick and others are at work on a test on the Arthur Zimmerman farm.

In Roundhead Township, Schmidt and others' No. 1 on the James Hill farm, shows about 250,000 feet of gas at a depth of 1,430 feet.

In Marion Township, Schmidt & Holmes' test on the Levi Coroy, Section 14, pumped 20 bbls. at from 1,400 to 1,430 feet, while they are drilling No. 1 on the Scioto Land Co.'s lease, Section 23. Should this well prove a commercial producer of either oil or gas, it will bring about an interesting extension.

Shelby County

Shelby County was the most southernly point so far developed in the Trenton Rock area, is being given a very interesting testing. There are approximately six strings of tools working in Cynthian Township. In this township, the only completion for the week was the Cashdollar Oil Co.'s No. 1 J. Zimmerman farm, Section 15, which shows a nice gas pressure and about 2 bbls. of oil. This pool was opened up by the Eilerman Brothers, now known as the Eilerman Oil Co., which campany is now drilling its third test on the Anna Eilerman farm, Section 26. Slagel & Johnson are drilling No. 1 J. Holscher, Section 15. McClure & Marshall are drilling No. 1 Perry Moyer farm; The Ohio Oil Co. is drilling No. 1 S. Swartz, Section 35. In Turtle Creek Township, McClure & Marshall are drilling a wildcat on the Wagoner farm.

Mercer County

The southern part of Mercer County got a nice play during the week, but the wells were rather light in most every instance. In Gibson Township, P. Harkless drilled a 2-bbl. pumper in a test on the S. Behm farm, Section 25; Sam Ttate & Son's No. 1 J. Brunswick, Section 23, pumped 4 bbls. The Delta Oil Co.'s No. 3 L. Klingehouse, Section 30, pumped 3 bbls., and Sam Albe's No. 1 P. Fecher farm, Section 18, pumped but 1 bbls.

In Butler Township, O. J. McGuiggan and others' No. 1 H. Wenker, Section 31, pumped 2 bbls. and George Lacknett and others' No. 1 G. McAfee, Section 30, pumped 2 bbls. C. Croft is drilling No. 1 B. Upperkamp farm, Section 6; H. C. Craft is drilling No. 1 Joe Able, Section 6; R. E. Young is drilling No. 1 John Dues, Section 7, and Courtney Combs has a rig in for No. 1 on the Caroline Neiberling, Section 29.

In Union Township, the Watson Oil Co. abandoned No. 1 G. W. Kinkley, Section 33,and No. 1 R. S. Kinkley, Section 34; same company has a rig in for No. 7 George Roebuck, Section 8. In Center Township, E. A. Kuhns and others, abandoned No. 1 Arthur Dick, Section 8. In Hopewell Township, the Home Banking Co. is drilling a test on the George F. Hellsworth, Section 28; in Washington Township, Henry Hohn is drilling a test on his farm, Section 1; Strong Brothers are drilling Nos. 2 and 3 F. V. Bollenbacker, Section 17.

Other Lima Field Wells

In Henry Township, Wood County, George E. Grant & Son's No. 2 G. Grant, Section 1, pumped 5 bbls. at a depth of 1,503 feet. The Trail Oil Co. is drilling No. 4 John Cahill, Section 24; in Bloom Township, George E. Grant & Son's No. 5 George Grant, Section 18, pumped 40 bbls. from 1,510 feet. In Liberty Township, B. C. Conklin's second well on the La Pointe farm, Section 19, pumped 12 bbls. W. E. Donnelly is drilling No. 3 D. F. Hodgman, Section 4. Ohio Oil Co. is drilling No. 20 John Drake, Sr. No. 1 farm, Section 20; and Schiedt, Hamann & Huston are drilling No. 1 W. M. Cooksey, Section 9.

In Plain Township, Wood County, the Ohio Oil Co. is drilling No. 1 Mose Lane farm, Section 33; J. Hendricks is drilling a test on his own farm, same section; E. C. Rockwood is drilling a test, same section, on his own farm; B. Perry is drilling a test on the Fay C. Burkhalter, Section 29, and Hulse & Koontz abandoned No. 2 H. A. Goodenough, Section 34. In Freedom Township, the Ohio Oil Co. is drilling No. 22 A. H. Bruning, Section 27.

In Perrysburg Township, Wood County, John E. Welton's second well on the George W. DeVerna, Section 27, pumped 20 bbls. Top of sand found at 1,236 and 44 feet in to a total depth of 1,280 feet. Melvery Good is drilling a second test on the Merlin R. Speck, Section 32. In Milton Township, Earl Klotz abandoned Nos. 1, 2, and 5 Charles M. Davis, Section 12.

In Bath Township, Allen County, C. A. Peavey and others' No. 9 Elias Lewis farm, Section 1, and in the southwest corner of the farm, pumped 10 bbls. Top of sand was found at 1,318 feet and sent to 1,350 feet deep; No. 10, same farm, is drilling; Carman, Botkins and others' are drilling No. 1 C. E. Plaugher, Section 16; Watson Oil Co. pulled out Nos. 1 and 2 J. B. Early, Section 3, and C. C. Apple did the same with Nos. 1 and 2 A. Allison, Section 2.

In Marion Township, Allen County, the Ohio Oil Co. is drilling No. 7 I. East farm, Section 13, and W. O. Huntley is drilling No. 1 Angeline Handle, Section 17. In Ottawa Township, F. J. Sawmiller has abandoned Nos. 3 and 4 on the Haskell and others' land, Section 30; in Monroe Township, C. C. Apple abandoned No. 1 G. E. Lamb farm, Section 35, and No. 1 E. O. Sawmiller, Section 35.

Auglaize County

In Logan Township, Auglaize County, E. L. Kirk and others' No. 1, on the southwest corner of F. Ziegenbush, Section 30, pumped 10 bbls. and the Waller Oil Co. is drilling No. 3 Mary A. Diggeldine, Section 3. In Moulton Township, Cliff Blair and others' No. 1 Dan Hanold, Section 34, pumped 10 bbls. and No. 2, same fram, is drilling. Young & Geseichens second well on the W. E. Cook, Section 34, pumped 2 bbls. George Lynch and others are drilling No. 1 Alvin Myers, Section 34; in Noble Township, P. Davidson and others are drilling No. 1 N. Eogt, Section 33.

In York Township, Van Wert County, the Lima Trust Co.'s No. 6 T. R. Hughes, Section 15, pumped 15 bbls. from the Trenton at 1,239 feet; Wheeler Oil Co.'s No. 2 William George, Section 22, pumped 20 bbls. In Harrison Township, Unknown parties drilled a 10-bbl. pumper at a test on the Steve E. Germann farm.

In Mississinewa Township, Darke County, the Cole Oil & Gas Co. is drilling No. 12 W. C. Disher, Section 2; H. A. Marlin is doing the same at No. 4 H. Schawnn, Section 2, and R. P. Earl, trustee, is drilling No. 7 Charles Miller, Section 11. In Allen Township, the Mondarke Oil & Gas Co.'s Nos. 9 and 10 J. T. Patton, Section 7, pumped 10 and 15 bbls. respectively. Creamer and others' are drilling No. 1 J. Peittenser, Section 10, and the Mondarke Oil & Gas Co. is drilling No. 2 G. L. Tomon, Section 7.

Indiana

Completions in Indiana were scattered, most being in parts of Jay County, in the Indiana Field. In Bear Creek Township, Jay County, Mesel & Mesel's No. 3 D. Bergman, Section 21, pumped 50 bbls. from the Trenton, and No. 3 J. H. Whitman, Section 10, pumped 10 bbls. Same company is drilling No. 4 D. W. Bergman; Rebecca M. Keith's No. 9 M. Campbell, Section 16, pumped 10 bbls. and her No. 8 James Hews, Section 20, is drilling.

In the Hotmier Pool, in Pike Township, Jay County, Masters and others' drilled a dry hole in a test on the Thomas Lyons, Section 34. Omar Oil & Gas Co.'s No. 10 M. Mott, Section 35, pumped 2 bbls. Makeever Brothers' & Masters' No. 6 Fannie Lyons, Section 34, pumped 5 bbls; Bundy, Thompson and others No. 10 C. Rathbun, Section 35, pumped 5 bbls.

In Monroe Township, Randolp County, the Murphy Co.'s No. 2 J. A. Jones, Section 9, pumped 5 bbls. and J. F. Salock abandoned Nos. 1, 2, 3, 4, 5, 6, and 7 L. C. Gable farm, Section 15.

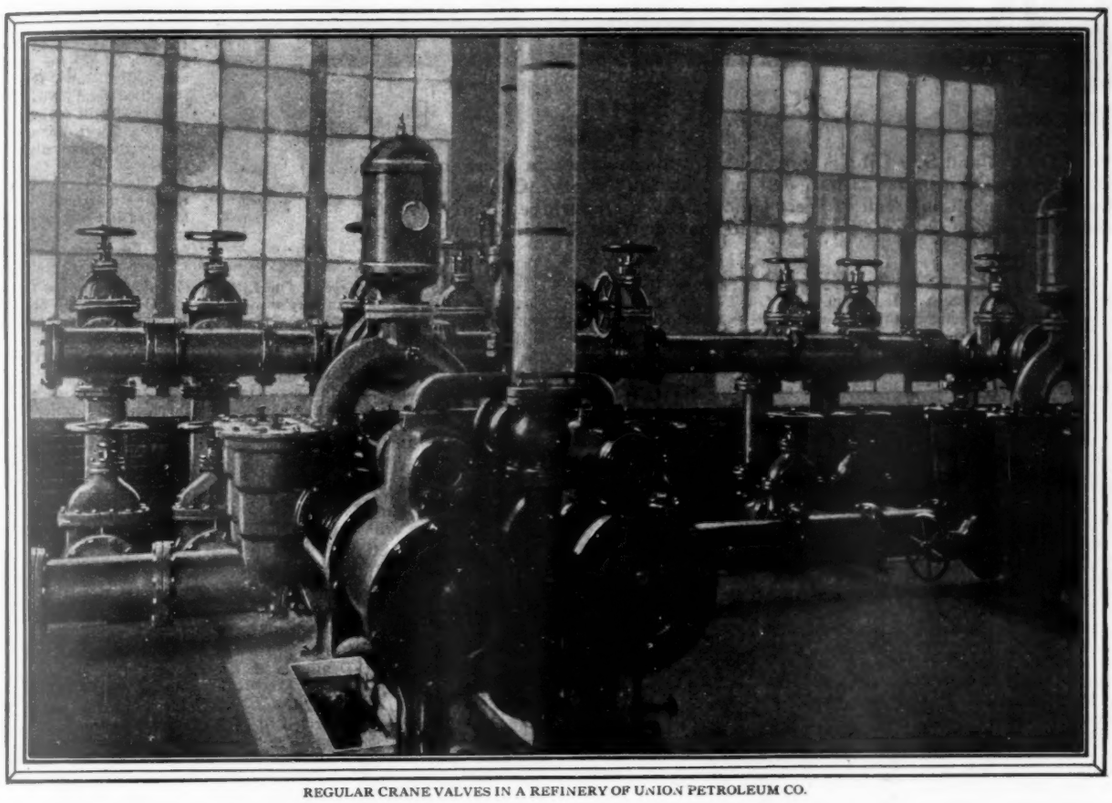
In Wayne Township, Huntington County, Sours and others' test on the F. Giltner heirs' farm, Section 2, was a dry hole.

In Jefferson Township, Adams County, the General Development Co. abandoned Nos. 1 and 2 George Bobensmyer farm, Section 29, and No. 1 Lon Weaver, Section 29. In Wabash Township, Frank Filer abandoned No. 3 D. Studebaker, Section 29.

Illinois

The Wabash County Field made the best showing in Illinois during the week, there being five completions, three above the average producer, the other two dusters. The best well was the Arkansas Fuel Oil Co.'s No. 8 on the Della Wright farm, Section 8, Wabash County, with a production of 140 bbls. This lease is the one in which the initial producer of what is known as the Wright-Smith Pool was drilled, that brought about an active drilling campaign a few years ago, but quieted down when failures were found on almost all sides of it. This county

(Continued on Page 82)



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Pennsylvania-West Virginia

By D. S. Wakenight

Pure Oil Co. and Sun Oil Co. get 50-bbl. producers each in Morgan County, Ohio. Pure Oil also has 25-bbl. well in Coshocton County. Clinton Oil & Gas Co. gets 35 or 40-bbl. well in West Union district, Doddridge County, W. Va., and Philadelphia Oil Co. 25-bbl. well in Clay district, Ritchie County.

PITTSBURGH, Pa., August 4.—The week of development work in the Eastern fields again proved unsatisfactory, being almost featureless. None of the districts, not even the deep sand territory in southeastern Ohio, presented any large wells. Contrary to the usual run, the shallow sand territory completed more good producers than the deep territory. In the Berea grit development in Section 29, York Township, Morgan County, the Pure Oil Co. got a 50-bbl. producer at a test on the C. S. Christman farm. In the same township, the Sun Oil Co. got the same kind of a producer when it drilled its second test on the Davis Oil Co.'s lease through the Berea grit. In Section 13, Monroe Township, Perry County, the Monper Oil & Gas Co.'s No. 10 on the Elwood Newberry farm is a light pumper in the Berea grit. In Section 33, Pleasant Township, the Allegheny Oil Co. has an 8-bbl. pumper at No. 19 on the Jacob McDonald farm.

Showing for Fair Producer

In Section 23, Perry Township, Licking County, the Carter Oil Co. has drilled a test on the Clark Deffling farm through the Clinton sand. The hole has filled up 1,100 feet with fluid and will make a fair producer after shot. In Hanover Township, the same company started to drill a second test on the Jacob Vanderbark farm. In Lot 12, Madison Township, near Newark, W. W. & A. T. Wehrle completed a light gasser in the Berea grit on the Stanley Darnes farm. In Section 10, Enoch Township, Noble County, Luebbe & Co. have a light show of oil in the Buell Run sand at a second test on the Thomas Hupp farm. In Jackson Township, E. E. West & Co. completed and shot in the Macksburg 500-foot sand a test on the Charles Reed farm, showing for a 5-bbl. pumper. In Section 21, Jackson Township, the Ohio Fuel Supply Co. has a show for an 8-bbl. pumper in the Berea grit at a second test on the C. B. Davidson farm. In the same township, the Arkansas Fuel Oil Co. has the same kind of a producer at No. 6 on the L. V. Dugan farm. In Section 21, Wayne Township, Belmont County, D. U. Powell & Co. drilled a second test on the A. C. Shepherd farm through the Keener sand, good for 3 bbls. a day. In Washington district, Monroe County, Harry Bingear & Co. started to drill a second test on the Esau Knowlton farm. In Section 4, Lawrence Township Washington County, Henning Brothers started to drill a test on the Winfield Huntsman farm.

Noble County Dusters

Out of five late completions in Noble County, four are dusters and one a very light pumper. In Section 32 Enoch Township, W. L. Clark & Co.'s test on the Edward Fogle farm is dry in the 700-foot sand. In Section 19, S. J. Harper and others completed two tests on the Francis Shafer farm. They are one-fourth mile south of production, and both dusters. In Section 7, Sharon Township, J. A. Renshausen & Co. have a duster in the 700-foot sand on the Nathan Cisler farm, 700 feet west of production on the Mary A. Keyser farm.

In Section 21, Enoch Township, S. J. Harper & Co.'s No. 10 on the Parker farm is not good for more than 2 bbls. a day in the Buell Run sand. In Lot 2, Licking Township, Licking County, W. W. and A. T. Wehrle have a light gasser in the Berea grit at No. 4 on the Charles Ice farm. In Lot 24, Franklin Township, the same parties have a light pumper in the same formation at No. 6 on the J. L. Watson farm. They are drilling No. 3 on the James Taylor farm and in Madison Township drilling No. 4 on the Stanley farm. In the same township, the Atha Oil Co. has a gasser good for 500,000 feet at 17 feet in the Clinton sand at No. 10 on the Melick Brothers' farm.

Fair Pumper in Coshocton County

In Clark Township, Coshocton County, the Pure Oil Co. has drilled a test on the S. R. Keiser farm through the Clinton sand and showing for a 20 or 25-bbl. producer. When shot its production may exceed this estimate. In Lot 7, Monroe Township, Holmes County, 5 miles northwest of Killbuck and 2 miles south of production on the Finney farm, Klice, Eckstein & McCann completed in the Clinton sand a test in the Charles Barnes farm. It is a gasser good for 2,000,000 feet a day and showing a little oil. It will be drilled deeper when the gas pressure subsides. In Section 28, Richland Township, Fairfield County, the Clinton Oil & Gas Co. started to drill a test on the Edward Morrow farm, one-half mile west of the Church Oil & Gas Co.'s production on the Reform Church property. In Section 18, Madison Township, Perry County, the Flint Ridge Oil & Gas Co. started to drill a test on the Alonzo Burgers farm. In Knox Township, Guernsey County, the Ohio Fuel Supply Co. started to drill on J. H. Addy farm.

West Virginia Completions

The West Virginia fields completed but two better than average wells. The better of the two is the Clinton Oil & Gas Co.'s No. 3 on the S. E. Smith farm, in West Union district, Doddridge County. It has been drilled through the Big Injun sand and good for 35 or 40 barrels a day. In Clay district, Ritchie County, 1 mile north of the Premier Window Glass Co.'s good producer on the Minerva Haymond farm, the Philadelphia Oil Co. completed in the Maxon sand No. 5 on the J. R. Marsh farm. It is good for 25 bbls. a day. The prospects are favorable for more fair producers located in the territory intervening between the Haymond farm producer and the recent completion on the Marsh farm. On Gillespie run, Grant district, the Burke Oil & Gas Co. completed No. 5 on the M. R. Burke farm. It is a duster in the Big Injun sand. In Union district, the Hope Natural Gas Co.'s test on the S. T. Wright farm is a gasser in the same formation. In Union district, the Carnegie Natural Gas Co. has a duster in the Gantz sand at a test on the John A. Hall farm. The Engle Run Oil & Gas Co.'s second test on the Delbert Adams farm in New Milton district, Doddridge County, is dry in the Big Injun sand. On Red Lick run, New Milton district, J. E. Trainer has a rig completed for a test on the F. P. Burbridge farm.

Wildcat Gassers

On the waters of Guyandotte River, Logan district, Logan County, the Ohio Fuel Oil Co.'s wildcat on the Lawson heirs' farm is a gasser in the Berea grit, good for 300,000 feet a day. On Dry Branch, Cabin Creek district, Kanawha County, the South Penn Oil Co.'s test on the Dry Branch Coal Co.'s property has been completed and shot in the same formation. It is a fair gasser. On Little Coal River, the same company's second test on the Black Band Coal Co.'s tract is a light gasser in the Berea grit. In the Big Run Pool, William district, Wood County, the Hoaglan Oil Co. has a duster at No. 6 on the Elizabeth Ogdin farm. In the same district, Charles S. Smith has a very light pumper at No. 5 on the Timothy McAtee farm. The Henderson Oil Co. has a light pumper in the Cow Run sand at No. 14 on the A. A. Kellar farm. On Walker Creek, Walker district, W. H. Jones & Co. scored a duster when they drilled through the Big Injun sand their test on the F. Reece farm. In Jefferson district, Pleasants County, the Creek Oil Co.'s No. 7 on the Isabelle Mathers farm is dry in the Squaw sand. W. H. Noland & Co.'s test on the S. P. Allen farm is dry in the Cow Run sand. The D. P. Carder Oil Co.'s test on the W. H. Dennis farm is a very light pumper in the first Cow Run sand.

The Creek Oil Co. has started to drill a second test on the Ogden-Ross farm. On Two Mile Creek, Malden district, Kanawha County, the Ohio Fuel Oil Co.'s test on the Mary E. Scott farm has been completed and shot in the Weir sand. It is a gasser, estimated at 1,000,000 feet a day. This location is 1 mile south of the Virginia Gasoline & Oil Co.'s production on the W. D. Lewis farm. In Courthouse district, Lewis County, the Philadelphia Oil Co.'s test on the Enon Clark farm is a gasser in the Gantz sand. In Indian Creek, Clay district, Monongalia County, the South Penn Oil Co. has drilled down from the Big Injun to the fifth sand, No. 31 on the Wildman farm. It will make a very light pumper in the lower formation. On Leading Creek, Sheridan district, Calhoun County, the R. P. Oil Co. has a rig completed for a test on the Grogg heirs' farm. In Center district, Wetzel County, the Myers Oil Co. has the rig completed and started to drill a test on the Allen heirs' farm.

In New Milton district, Doddridge County, the Hope Construction & Refining Co. has a 15-bbl. pumper in the Big Injun sand at a test on the W. H. H. Douglass farm. In Carroll district, Lincoln County, the Columbia Gas & Electric Co. has a gasser in the Big Injun sand at a test on the George Stowers farm. Eight miles west of Pine Grove, Greene district, Wetzel County, C. T. and M. R. Rawa have completed in the Big Injun sand a second test on the Leonard Mason farm, a 5-bbl. pumper. On Fishing Creek, Grant district, the South Penn Oil Co. drilled No. 40 on the B. W. Peterson farm down to the fourth sand. It is a light gasser at a total depth of 3,290 feet.

Marion County Completions

In Mannington district, Marion County, the Philadelphia Oil Co.'s test on the Martha Rowand farm is a light pumper in the Gordon sand. In the same district, C. A. Snodgrass has a gasser in the Big Injun sand at a test on the Caroline Toothman farm. In Central district, Doddridge County, L. W. Williams & Co. have a 4-bbl. pumper in the Big Injun sand at a test on the C. W. Williams

(Continued on Page 82)

West Kentucky-Tennessee

By Vern T. Whitney

BOWLING GREEN, Ky., Aug. 4.—Development work in the Western Kentucky field remains comparatively quiet. Very little new work has been started in any of the producing counties outside of Allen and Barren. In the Owensboro district three holes were spudded in and at least our new locations were staked off.

Two cuts in the price of crude, amounting to 20 cents, during the month of July, in Western Kentucky, and a 15-cent drop in Cumberland, Monroe and Barren Counties caused a majority of the operators to hang up their tools and await better market conditions. Early in the season, when stability in prices seemed assured, there was prospect for lively activity during the summer months, but many operators are now taking the attitude that the oil is worth more in the ground with a price below the 2 mark.

Week's Work

During the week 21 completions were reported, 17 producers with a flush of 180 bbls., and four dry holes. Compared with last week's figures, this shows two more completions, two more producers, a loss of 108 bbls. in production, one more duster and one less gas well.

The wells were distributed by counties as follows:

County—	Comp.	Wells	Prod.	Dry	Gas
Owensboro district	6	3	32	2	0
Allen	6	5	16	1	0
Warren	3	3	67	0	0
Barren	5	5	46	0	0
Cumberland-Monroe	2	1	20	1	0
Total	21	17	180	4	0
Last week total	19	15	288	3	1
Difference	2	2	108	1	1

Owensboro District

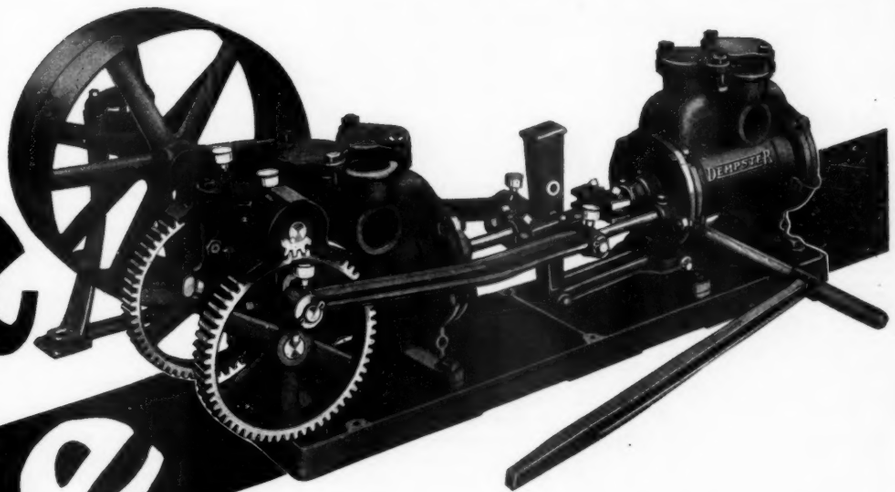
The effort of wildcatters to extend the area from the section around the Pellville and the Herbert school house oil pools, in the Owensboro district, the past several weeks has met with a number of setbacks, and for the present little encouragement is offered in either direction from the two localities. The McCombs Producing & Refining Co., which was drilling a test at the Sugar Grove school house, in Ohio County, was the first to meet with a disappointment when it registered a dry hole after passing the estimated depth where the Barlow sand should have been found. Northwest of the Pellville section the same company associated with the Petroleum Exploration Co. and the New Domain Oil & Gas Co. has completed a duster near Adair station, west of Lewisport in Ohio County, on the Henderson farm, after drilling approximately 1,000 feet. However, this well furnished quite a bit of interest in that it showed a quantity of Barlow sand, to a depth of about five feet, with a small showing of oil. Out of this they went into water indicating the location was too low off the structure, and it is reported the same companies will drill another test in the same locality. The associated companies have had several geologists going over the territory and have very favorable reports, and inasmuch as they are holding a large acreage between Adair and Hawesville they will give the territory a thorough test.

South of Whitesville, on the Dave King farm, the Greasy Creek Drilling Co. has finished No. 2 on that farm, which is classed as a dry hole although a very creditable showing of oil was encountered in the Jett sand, and it is probable the hole will be plugged back and shot in this formation. This test suffered a very serious delay toward completion when the casing parted while it was being run and practically two weeks were consumed in fishing it out.

There seems at present a very discour-

(Continued on Page 120)

The Only 2 Pump Outfit on a Single Base



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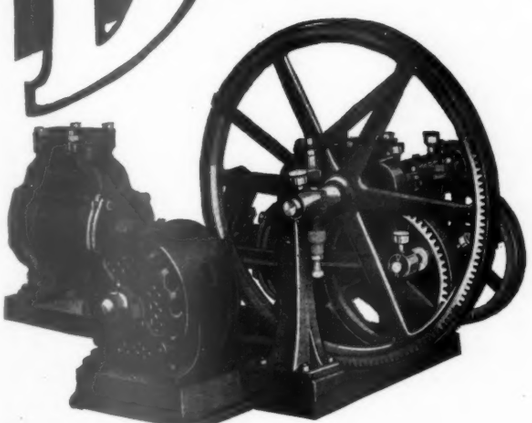

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DEMPSTER OIL PUMPS

Initial Output Registers Slight Gain

Major Areas, However, Showed Decrease in Flush Output in July With Richland, Luling and Montana Offseting Losses

SUMMARY OF ALL FIELDS

Wells Completed

Field—	Comp.	Prod.	Dry	Gas
Eastern	408	1,576	56	56
Lima	65	1,030	3	6
Indiana	13	122	3	0
Central Ohio	37	170	6	23
Kentucky	168	2,595	41	3
Tennessee	7	4	5	0
Mississippi	3	0	3	0
Illinois	15	457	2	2
Kansas	144	9,253	31	5
Oklahoma	424	109,454	118	24
N. Central Texas	313	15,210	122	10
E. Central Texas	54	19,526	11	1
Louisiana-Arkansas	182	28,035	33	14
Gulf Coast and S. W. Texas	159	46,824	39	6
Wyoming	80	13,760	6	2
Montana	26	6,200	12	0
Colorado	2	50	0	1
Total July	2,100	254,266	491	153
Total June	2,081	225,631	461	187
Difference	19	28,635	30	34

Rigs and Wells Drilling

Field—	Rigs	Drg.	Ttl.
Eastern	167	477	644
Lima	11	74	85
Indiana	1	18	19
Central Ohio	38	88	126
Kentucky	19	214	233
Tennessee	3	12	15
Alabama	0	11	11
Georgia	1	4	5
Illinois	4	30	34
Kansas	72	256	328
Oklahoma	253	1,252	1,505
N. Central Texas	71	293	364
E. Central Texas	23	86	109
Louisiana-Arkansas	62	332	394
Gulf Coast and S. W. Texas	164	580	744
Wyoming	108	295	403
Montana	20	123	143
Colorado	8	39	47
Utah	1	25	26
New Mexico	2	12	14
Total July	1,028	4,221	5,249
Total June	1,126	4,378	5,504
Difference	98	157	255

While there were only 19 more wells completed in the various oil fields east of California during July than in June, the initial production showed a gain of 28,635 bbls. Three areas were mainly responsible for the increase in flush output, they being the Richland Field in Navarro County, Texas, the Luling Field in Southwest Texas and the Sunburst Field in Montana. New work showed a falling off during July as compared to June, there being 98 less rigs and 157 less drilling wells. Oklahoma, Kansas, Louisiana-Arkansas and North Texas all showed a decrease in the amount of initial production in July as compared to June.

OKLAHOMA

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Washington-Nowata-Rogers	24	439	6	0
Osage	108	30,366	25	2
Tulsa	16	3,140	8	0
Okmulgee	30	1,755	10	4
Okfuskee-Hughes-Seminole-McIntosh	44	33,425	9	4
Muskogee-Wagoner	34	448	18	2
Creek	42	13,088	7	1
Pawnee	10	550	3	1
Payne	1	198	0	0
Kay	9	3,118	1	1
Garfield-Noble	16	3,495	1	0
Carter	39	3,612	8	4
Stephens-Cotton	18	72	8	3
Miscellaneous	33	15,748	14	2
Total July	424	109,454	118	24
Total June	514	111,884	126	38
Difference	90	2,430	8	14

Summary of New Operations

County—	Rigs	Drg.	Ttl.
Washington-Nowata-Rogers	0	9	9
Osage	37	145	182
Tulsa	13	50	63
Okmulgee	20	80	100
Okfuskee-Hughes-Seminole-McIntosh	55	206	261
Muskogee-Wagoner	14	45	59
Creek	32	129	161
Pawnee	10	45	55
Payne	3	17	20
Kay	7	87	94
Garfield-Noble	14	65	79
Carter	15	108	123
Stephens-Cotton	4	42	46
Miscellaneous	29	233	262
Total July	253	1,252	1,505
Total June	246	1,205	1,451
Difference	7	47	54

The average initial production of the producing oil wells mounted again in July when 282 out of 424 wells finished in that month were commercial producers and totaled 109,454 bbls. initially, or an average of 389 bbls. per well. In June, the average was 319 bbls. and in May, 285 bbls. per oil well. With this high average of flush output, the total initial production was only 2,430 bbls. less than in June, although there were 90 fewer completions.

Among the areas that figured prominently in the reports of the month were Creek County, with 13,088 bbls. initial output from only 42 completions, 3,414 bbls. more than in June, although the completions were 12 fewer; Okfuskee-Hughes-Seminole-McIntosh Counties with 33,425 bbls. from 44 completions, a gain of 3,493 bbls. and a loss of 13 completions; and the miscellaneous counties with 15,748 bbls. from 33 wells finished. In June, these counties had 22 completions which were good for only 301 bbls. initial production. Stroud Field, with its large flowing wells, was chiefly responsible for the showing of the outside areas, and the effect was noticeable for the showing of the outside areas, and the effect was noticeable in July because many of the wells there have been carried on reports for a long time after they came in, due to the constant deepening operations.

Tulsa County fell off from 42 completions, yielding 5,320 bbls. in June, to only 16 completions and 3,140 bbls. in July. Okmulgee County also suffered a relapse, while the decline was greatest in Kay Coutny.

The summary of new operations shows a slight increase in Oklahoma. The total for July is just 54 greater than in June, however, and the figures for the various counties are practically the same, with minor variations both ways. The increases are due to the new fields where active drilling campaigns continue to be pushed in spite of proration and crude cuts. It is probable that the figures will remain parctically the same for next month, also, with possibly a slight decrease in the number of rigs.

KANSAS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Butler	6	65	4	0
Montgomery-Wilson-Neosho-Allen	19	410	5	4
Miami-Franklin-Anderron	67	2,515	14	0
Greenwood-Woodson	35	2,513	3	0
Marion	1	0	1	0
Chautauqua-Elk	3	110	1	0
Miscellaneous	13	3,640	3	1
Total July	144	9,253	31	5
Total June	81	9,803	22	3
Difference	63	550	9	2

Summary of New Operations

County—	Rigs	Drg.	Ttl.
Butler	3	13	16
Montgomery-Wilson-Neosho-Allen	3	11	14
Miami-Franklin-Anderson	0	12	12
Greenwood-Woodson	30	63	93
Marion	4	3	7
Chautauqua-Elk	2	7	9
Miscellaneous	30	147	177
Total July	72	256	328
Total June	73	226	299
Difference	1	30	29

While the number of completions reported from the Kansas Fields during the month of July was 63 greater than in June, the initial production was just about the same and the average initial production of each oil well finished in July—excluding dry holes and gassers—was 86 bbls. in contrast to the average of 175 bbls. in June. The excess of completions during the past month was partly due to the failure of numerous completions in the old areas of Miami-Franklin-Anderson Counties and others to get into last month's report. Greenwood County was especially inactive during July, having only 35 completions to its credit, with a total of 2,513 bbls. initial production, as compared with 60 completions and 6,210 bbls. in June. Greenwood County has been declining steadily since its peak in May when 71 wells were finished within its borders and yielded 10-380 bbls. initially. The miscellaneous counties furnished about the same amount of new production in July as in June, having produced 3,640 bbls. from 13 completions in the latter month. The Rainbow Bend Pool, in Cowley County, and the Russell Pool, in Russell County, supplied the bulk of this production.

The number of rigs and wells drilling in the State remained practically stationary during July, the rigs having decreased in Greenwood County and increased about the same amount in the wildcat districts. The drilling wells also showed a gain in the miscellaneous counties and the net gain in operations amounted to 29. It is probable that the figures for next month will show a noticeable decrease both in rigs and drilling wells, and also in the number of completions as Kansas operators have displayed a tendency already to curtail the bringing in of new oil until market conditions have been adjusted.

EAST CENTRAL TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Navarro	53	19,526	10	1	16	46	62
Miscellaneous	1	.....	1	0	7	40	47
Total July	54	19,526	11	1	23	86	109
Total June	27	4,260	13	0	13	104	117
Difference	27	15,266	2	1	10	18	8

The new Richland Field, in Navarro County, southwest of the Powell Field, was largely responsible for the increase in the number of completions and in new production in July over June. The Richland Field appears to be made up of a small structure with a richly saturated oil sand and a number of good wells, the largest having been the Sun Oil Co.'s No. 7 W. F. Brown, which came in at 3,250 bbls. a day and Stroube & Stroube's No. 1 Davis, which started at 2,865 bbls. per day. In the Powell Field, most of the completions were shallow sand wells. Several sands have recently been discovered, which were passed through in the hurried rotary drilling to find the deep producing sand which yielded from July 1923 to June 1924, inclusive, a total of 49,614,021 bbls. The only big well in the deep sand completed in Powell in July was the Skelly Oil Co.'s No. 9 Keith, which started at 1,250 bbls. There was a little decline in the total number of rigs and drilling operations. Most of the wildcat drilling, carried as miscellaneous, was shut down when this report was made up.

NORTH CENTRAL TEXAS

Summary of Wells Completed

District—	Comp.	Prod.	Dry	Gas
Wichita	59	4,310	18	0
Burkburnett	20	290	9	0
Eastland	25	230	11	3
Stephens County	21	1,560	3	1
Young	9	45	7	0
Archer County	122	6,045	44	0
Wildcats	57	2,730	30	6
Total July	313	15,210	122	10
Total June	339	21,907	110	8
Difference	26	6,697	12	2

Summary of New Operations

District—	Rigs	Drg.	Ttl.
Wichita-Wilbarger	14	63	77
Burkburnett	2	4	6
Eastland	2	21	23
Stephens	10	59	69
Young	4	16	20
Archer	15	49	64
Wildcats	24	81	105
Total July	71	293	364
Total June	109	387	496
Difference	38	94	132

A decrease in completions and 6,697 bbls. less new production marked the North Central Texas Field in July. There were 55 less completions in Archer County and 7,065 bbls. less production. There were 26 more wildcat completions and 1,740 bbls. more new production. Of new operations there was a decrease of 64 in Archer County and of 19 in wildcats.

N. LOUISIANA AND S. ARKANSAS

Summary of Field Operations

Dist.—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Union County: (Smackover & El Dorado)	88	19,253	14	2	20	112	132
Ouachita Co.: (Smackover)	53	3,067	5	2	19	72	91
Stephens Field: (Columbia & Ouachita Counties	4	115	0	0	3	15	18
Nevada Co.	0	0	0	0	2	3	5
Bellevue	5	21	3	0	0	2	2
Caddo	5	44	0	0	4	13	17
Claiborne	0	0	0	0	0	0	0
Cotton Valley	8	5,535	0	3	0	28	28
De Soto	0	0	0	0	0	1	1
Red River	0	0	0	0	0	0	0
La. wildcats	15	0	8	7	10	57	67
Ark. wildcats	4	0	4	0	4	29	33
July	182	28,035	33	14	62	332	394
June	215	33,949	26	26	103	382	485
Difference	33	5,914	7	12	41	50	91

Reports from practically all districts in North Louisiana and South Arkansas evidence decreased drilling activity during the month of July with on prospect of any improvement during the coming month. The completion of 182 wells, of which 135 were producers, resulted in the addition of only 28,035 bbls. of new production to the output of the field, and at the close of the month there were 394 drilling wells and rigs, a decrease of 91 since the close of the previous month. Featuring the month's development was the completion of several good wells in the Cotton Valley district in Webster Parish, adding 5,535 bbls. to the output of the North Louisiana Field.

GULF COAST

Summary of Field Operations

Dist.—	Comp.	Prod.	Dry or SW Gas	Rigs	Drg.	Ttl.
Batson	4	1,610	0	2	5	7
Blue Ridge	0	0	0	1	3	4
Barber Hill	0	0	0	0	2	2
Big Creek	0	0	0	0	5	5
Dayton	0	0	0	0	1	1
Damon Mound	2	0	2	0	1	1
Edgerly (La.)	3	80	1	0	0	0
Goose Creek	16	3,060	3	5	18	23
Humble	4	3,050	2	0	2	11
Hull	18	8,945	3	0	6	17
Jennings	5	40	3	0	1	2
Markham	0	0	0	0	0	2
Orange	14	10,140	1	0	2	15
Pierce Jct.	1	0	0	1	0	1
Spindletop	5	105	3	0	0	3
Saratoga	3	52	1	0	0	5
Sour Lake	6	285	2	0	1	4
Vinton	11	1,825	1	0	3	7
W. Columbia	3	800	1	0	0	4
Miscellaneous, Gulf Coast	5	700	3	0	11	34
Total July	100	30,692	25	1	34	142
Total June	94	11,830	36	2	26	114
Difference	6	18,862	11	1	8	28
Southwest Fields—						
Luling	26	14,910	5	1	17	45
Laredo	13	775	1	3	3	14
Somerset	3	38	0	0	2	6
Callihan	8	130	3	0	2	11
Rockdale-Minerva	5	219	2	0	3	10
Miscellaneous, S. W. Cos.	4	0	3	1	103	352
Total July	59	16,132	14	5	130	438
Total June	40	14,467	8	8	151	488
Difference	19	1,665	6	3	21	50
Grand total July	159	46,824	39	6	164	580
Grand total, June	134	26,297	44	10	177	602
Difference	25	20,527	5	4	13	22

Big wells in the Hull, Humble, Orange and Vinton Pools caused the unusually large increase in the Coastal Pools. Twenty-five of the completions were dry or salt water holes, with one gas well at Pierce Junction. Two wells at High Island, a semipool in Galveston County, came in with an initial output of 700 bbls. One is a deep hole and one at the extremely shallow depth of 195 feet.

The Luling Field shows 26 completions with 14,910 bbls. of the total new production. The resumption of work by the United North & South Oil Co. which drilled in wells on the lime previously shut down, is responsible for the figures for that field. The big gas well at Brun

(Continued on Page 86)

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Production in Mexico Is Increasing

Substantially Higher During First Five Months of 1924 Than for Corresponding Period of the Previous Year

By L. M. Fanning

Petroleum production in Mexico for the first five months of 1924, according to official figures for the first quarter and unofficial figures for the months of April and May, was substantially higher than for the corresponding period of last year. The total for the five months of 1924 is 63,562,712 bbls., as against 60,253,100 bbls. for the same period of 1923. Heavy oil production supplied about 75 per cent of the total during the period in 1924, while during the first five months of 1923 production of light and heavy oil was about even, each contributing about 50 per cent of the total.

The Mexican statistics presented in this article are official figures compiled by the Department of Special Taxes, Mexican Treasury Department. They are complete for the year 1923, and for the first quarter of 1924. The most striking change in Mexican production is the increase in heavy oil production and the decline in light oil.

Petroleum production in Mexico for the first quarter totaled 38,554,712 bbls. or a daily average of 423,678 bbls., compared with 35,906,114 bbls., a daily average of 398,956 bbls., during the first quarter of 1923. Heavy oil production for the period amounted to 28,621,651 bbls., a daily average of 314,524 bbls., against 16,584,398 bbls., a daily average of 184,270 bbls., and light oil production, 9,933,061 bbls., a daily average of 109,154 bbls., compared with 19,321,716 bbls., a daily average of 214,686 bbls. during the first quarter of 1923.

Table 1 gives official figures for the first quarter of 1924 and 1923 and unofficial figures for April and May of 1924.

Tables 2, 3, and 4 give the production by companies for January, February and March of 1924.

Mexico produced 149,340,825 bbls. in 1923, of which 87,689,476 bbls. were from the so-called Tampico zone (heavy oil); 61,647,577 bbls. from the Tuxpam zone (light oil), and 3,782 bbls. from the Isthmus of Tehuantepec zone (light oil). The production by months is shown in Table 5.

Mexico's production of 149,340,835 bbls. in 1923 represented a decrease of 35,716,414 bbls. compared with 1922 when 185,057,249 bbls. were produced. The peak of Mexico's oil output was reached in 1921 when 194,755,712 bbls. were produced. In 1920 production amounted to 156,539,011 bbls. The production by months for the four years is given in Table VI.

The Huasteca Petroleum Co. (Pan-American Petroleum & Transport Co.) was the largest producing company in 1923, with a total of 33,283,189 bbls., all light oil from the Tuxpam zone. This represented 22.3 per cent of the total oil produced. The Corona Company (Royal Dutch) ranked second with a production of 30,667,562 bbls., or 20.5 per cent of the total, of which 29,646,556 bbls. was from the Tampico zone and 1,021,006 bbls. from the Tuxpam zone. The Transcontinental Petroleum Co. (Standard Oil Co. New Jersey) produced 23,844,226 bbls., or 16 per cent of all the oil produced. Of this, 22,943,310 bbls. was heavy oil from the Tuxpam zone and 900,916 bbls. light oil from the Tampico zone. The Mexican Gulf Oil Co. produced 7,870,381 bbls., or 5.3 per cent of the total, of which 2,342,962 bbls. was heavy oil and 5,527,419 bbls. light oil.

(Continued on Page 76)

TABLE NO. 1
Petroleum Production in Mexico First Five Months of 1924 and Corresponding Period of 1923

	1924			1923		
	Heavy Barrels	Light Barrels	Total Barrels	Heavy Barrels	Light Barrels	Total Barrels
January	9,342,367	2,450,917	11,793,284	5,389,003	1,703,385	12,492,388
February	9,499,724	3,547,743	13,047,467	5,195,716	6,092,104	11,287,820
March	9,779,560	3,934,401	13,713,961	5,999,679	6,126,227	12,125,906
Ttoal for quarter	28,621,651	9,933,061	38,554,712	16,584,398	19,321,716	35,906,114
Daily aver., quarter.	314,524	109,154	423,678	184,270	214,686	398,956
April	*9,508,000	*2,999,000	*12,507,000	6,420,354	5,361,804	11,782,158
May	*9,223,000	*3,278,000	*12,501,000	7,517,978	5,046,850	12,564,828

*Unofficial estimates.
Note—Does not include small quantity produced on Isthmus of Tehauntepec.

TABLE NO. 2
Petroleum Produced in Mexico January, 1924, by Companies
(Stated in Barrels)

Companies—	Crude Heavy	Crude Light	Total	Pct.
Aguila El Cia. Mex. de Pet.	69,259	256,321	325,180	2.8
Agwi Cia. Petrolera del	.....	81,940	81,940	0.7
Atlantica Cia. Prod. y Refinad	.....	16,782	16,782	0.2
Azteca Pet. Co.	.....	.....	.....	...
Brings and Lufft, S. en C.	51,238	.....	51,238	0.4
Capuchinas Cia. de Pet.	.....	61,950	61,950	0.5
Consolidated Oil Fields Corp.	6,598	.....	6,598	0.1
Continental Mex. Pet. Co.	3,415	2,447	5,862	0.0
Corona La Cia. de Pet.	1,076,955	57,560	1,134,516	9.6
Cortes Oil Corp.	.....	13,593	13,593	0.1
C. V. Schlact	.....	2,095	2,095	0.0
D. H. Williamson	28,965	.....	28,965	0.3
English Oil Co.	11,504	.....	11,504	0.1
East Coast Oil Co.	369,116	.....	369,116	3.1
Espuela Oil Co.	24,996	.....	24,996	0.2
E. W. Price	107	.....	107	0.0
Ft. OC. Nacionales de Mexico	109,459	.....	109,459	0.0
Financiera de Pet. S. A.	37,366	.....	37,366	0.3
Franco Espanola Cia. de Pet.	182	.....	182	0.0
Freeport and Mex. Fuel Oil Corp.	.....	.....	.....	...
Giralda La Cia. de Pet.	415	.....	415	0.0
Globe Pet. Co.	17,587	.....	17,587	0.2
Gonzalez Meriweather	.....	47,232	47,232	0.4
Hispano Cubana Cia. de Pet.	.....	.....	.....	...
Huasteca Petroleum Co.	.....	1,123,061	1,123,061	9.5
H. G. Venable S. en C.	20,273	.....	20,273	0.2
Imperio Cialde Gas y Combust.	921,806	.....	921,806	7.8
Indiana Mexicana Cia. de Pet.	.....	10,907	10,907	0.1
International Pet. Co.	1,139,471	307,556	1,447,027	12.3
Inversiones Pet. Cia. Mexicana	.....	33,048	33,048	0.3
Ita, Mex. Oil Co.	31,947	.....	31,947	0.3
J. F. White	11,140	.....	11,140	0.1
J. D. Lavin	1,793	.....	1,793	0.0
J. L. Hudson	.....	.....	.....	...
Kern Mex. Oil Fields	359	.....	359	0.0
Kone Willis	969	.....	969	0.0
Maritima, La Cia. Mex. de Pet.	7,101	.....	7,101	0.1
Meridional La Cia. Mex. de Pet.	3,428	.....	3,428	0.0
Mexican Atlas Pet. Co.	64,133	.....	64,133	0.6
Mexican Crude Oil Co.	9,460	.....	9,460	0.1
Mexicana de Pet. "El Sol"	39,552	.....	39,552	0.3
Mexico y Espana Cia. de Pet.	1,403	.....	1,403	0.0
Mexican Gulf Oil Co.	1,243,778	125,026	1,368,804	11.6
Mexico, Cia. Nac. de Pet.	4,372	.....	4,372	0.0
Mexican Sinclair Pet. Corp.	129,285	10,171	139,456	1.2
Mexicana de Pet. S. A.	12,888	.....	12,888	0.1
Mexicana de Combust.	12,536	270	12,806	0.1
National Oil Co.	16,486	.....	16,486	0.2
New England Fuel Oil	361,323	.....	361,323	3.1
Norman Mexican Pet.	14,439	.....	14,439	0.1
Otontopec, Cia. de Petroleo	.....	7,730	7,730	0.1
Panuco Boston Oil Co.	50,943	.....	50,943	0.4
Penn Mex Oil Co.	164	119,604	119,768	1.0
R. B. Cochran	7,523	.....	7,523	0.1
Richmex Pet. Co.	933,876	.....	933,876	7.9
R. G. Piper, S. en C.	.....	3,038	3,038	0.0
Tal Vez Cia. Petrolera	2,824	.....	2,824	0.0
Tampico Amatlan	.....	654	654	0.0
Tampico Bancking Co.	3,623	.....	3,623	0.0
Tampico Panuco Oil Co.	2,749	.....	2,749	0.0
Texas Co. of Mexico, S. A.	158,734	24,229	182,963	1.6
Transcontinental de Petroleo	2,326,847	60,283	2,387,130	20.2
Vincent and Batte	.....	85,820	85,820	0.7
Total	9,342,367	2,450,917	11,793,284	100.0

TABLE NO. 3
Petroleum Produced in Mexico, February, 1924, by Companies
(Stated in barrels.)

Companies—	Crude Heavy	Crude Light	Total	Pct.
Aguila El Cia. Mex. de Pet.	28,230	349,315	377,545	2.9
Agwi Cia. Petrolera del	.....	110,868	110,868	0.9
Atlantica La., Cia. Prod. y Ref.	.....	31,400	31,400	0.3
Azteca, Cia. de Pet.	.....	7,369	7,369	0.1
Brings and Lufft, S. en C.	36,092	.....	36,092	0.3
Capuchinas, Cia. de. Pet.	.....	58,988	58,988	0.5
Consolidated Oil Fields	3,749	.....	3,749	0.0
Continental Mex. Pet Co.	3,459	270	3,729	0.0
Corona La. Cia. de Pet.	813,372	49,716	863,089	6.8
Cortez Oil Corp.	.....	10,511	10,511	0.1
C. V. Schlact	.....	1,673	1,673	0.0
D. A. Williamson	39,690	.....	39,690	0.3
English Oil Co.	11,529	.....	11,529	0.1
East Coast Oil Co.	362,027	.....	362,027	2.8
Espuela Oil Co.	30,381	.....	30,381	0.2
Ferroncarriles Nacls. de Mex.	103,640	.....	103,640	0.8
Financiera de Pet. S. A.	27,450	.....	27,450	0.2
Franco Espanola, Cia. de Pet.	390	.....	390	0.0
Giralda La. Cia. de Pet.	528	.....	528	0.0
Globe Pet. Co.	10,473	.....	10,473	0.1
Gonzales y Meriweather	.....	7,135	44,879	0.3
Hispano Cubana Cia. de Pet.	.....	2,327	2,327	0.0
Hispano Mexicana, Cia. de Pet.	346	.....	346	0.0
Huasteca Pet. Co.	.....	2,134,820	2,134,820	16.4
H. G. Venable S. en C.	8,428	.....	8,428	0.1
Imperior Cia. de Gas y Comb.	862,629	.....	862,629	6.6
Indiana Mexicana Cia. de Pet.	.....	9,479	9,479	0.1
Internacional Pet. Co.	1,657,591	328,275	1,985,866	15.2
Inversiones Pet. Cia. Mexicana	.....	27,745	27,745	0.2
Itamex Oil Co.	27,626	.....	27,626	0.2
J. F. White	10,246	.....	10,246	0.1
J. D. Lavin	9,410	.....	9,410	0.1
Kern Mex. Oil Fields	59,139	.....	59,139	0.5
Kone Willis	211,105	.....	211,105	1.6
Maritima La. Cia., Mex. de Pet.	8,020	.....	8,020	0.1
Meridional Cia Mex. de Pet.	4,353	.....	4,353	0.0
Mexicana Atlas Pet. Co.	58,327	.....	58,327	0.4
Mexicana de Pet. "El Sol"	94,155	.....	94,155	0.7
Mexico y Espana, Cia de Pet.	2,837	.....	2,837	0.0
Mexican Gulf Oil Co.	1,111,367	87,815	1,119,182	9.2
Mexico, Cia Nac. de Pet.	7,013	.....	7,013	0.1
Mexican Sinclair Pet. Corp.	145,167	10,014	155,181	1.2
Mexicana de Pet. S. A.	240,316	.....	240,316	1.8
Mexican Oil Co.	5,403	.....	5,403	0.0
Mexicana de Combustible	11,366	8,605	19,971	0.2
National Oil Co.	13,335	.....	13,335	0.1
New England Fuel Oil Co.	300,687	.....	300,687	2.3
Norman Mex. Pet. Co.	10,177	.....	10,177	0.1
Otonepec Cia de Pet.	.....	6,837	6,837	0.1
Panuco Boston Oil Co.	61,699	.....	61,699	0.5
Penn Mex. Fuel Co.	.....	111,616	111,616	0.9
R. B. Cochran	7,271	.....	7,271	0.1
Richmex Pet. Co.	878,367	.....	878,367	6.7
R. G. Piper, S. en C.	.....	3,724	3,724	0.0
Tal Vez. Cia de Pet.	2,636	.....	2,636	0.0
Tampico Amatlan, Cia de Pet.	.....	799	799	0.0
Tampico Bancking Co.	3,252	.....	3,252	0.0
Tampico Panuco Cia de Pet.	1,931	.....	1,931	0.0
Texas Co. of Mexico S. An.	167,584	21,097	188,681	1.4
Transcontinental de Pet.	2,046,930	56,465	2,103,395	16.1
Vincent and Batte	.....	73,146	73,146	0.5
Total	9,499,724	3,547,743	13,047,467	100.0

TABLE NO. 5
Production of Petroleum in Mexico by Producing Zones, 1923
(Stated in barrels.)

	Tampico Zone (Heavy oil)	Tuxpam Zone (Light oil)	Isthmus Zone (Light oil)	Total
January	5,389,003	7,103,385	1,051	12,393,439
February	5,195,716	6,092,104	1,849	11,289,669
March	5,999,679	6,126,227	19	12,125,925
April	6,420,354	5,361,804	25	11,782,183
May	7,517,978	5,046,850	19	12,564,847
June	8,017,284	4,614,105	13	12,631,402
July	7,995,269	4,800,798	554	12,796,621
August	8,401,025	4,697,926	19	13,098,970
September	7,585,646	4,096,469	214	11,682,329
October	7,713,276	4,751,975	13	12,465,264
November	8,633,623	4,835,469	6	13,469,098
December	8,920,623	4,120,465	..	13,041,088
Total	87,689,476	61,647,577	3,782	149,340,835

Production of Petroleum in Mexico, 1920 to 1923 Inclusive

TABLE NO. 6
(Stated in Barrels)

	1920	1921	1922	1923
January	8,160,143	16,240,622	21,034,728	12,393,439
February	7,630,028	15,063,865	17,665,848	11,289,669
March	9,934,212	17,841,887	18,918,288	12,125,925
April	9,739,719	18,614,790	16,193,983	11,782,183
May	12,374,311	16,863,282	16,775,090	12,564,847
June	12,733,451	16,976,597	17,105,856	12,631,402
July	14,321,242	17,397,266	14,974,923	12,796,621
August	14,909,854	8,987,070	12,750,673	13,098,970
September	15,568,750	12,740,836	11,430,760	11,682,329
October	17,437,660	14,984,309	12,584,353	13,465,264
November	15,920,764	21,113,448	12,539,447	13,469,098
December	17,808,877	23,931,740	13,033,301	13,041,088
Total	156,539,011	194,755,713	185,057,249	149,340,835

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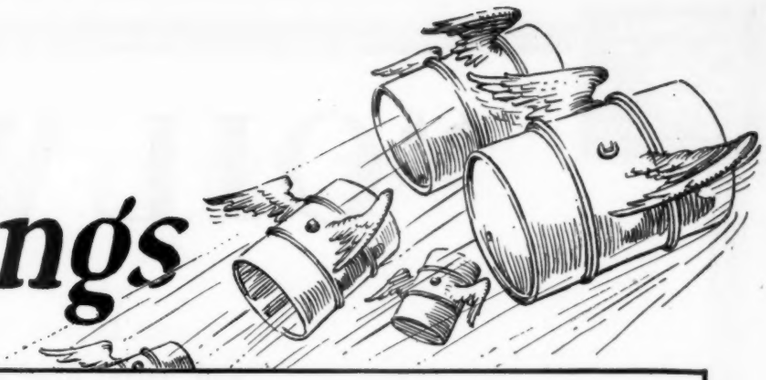

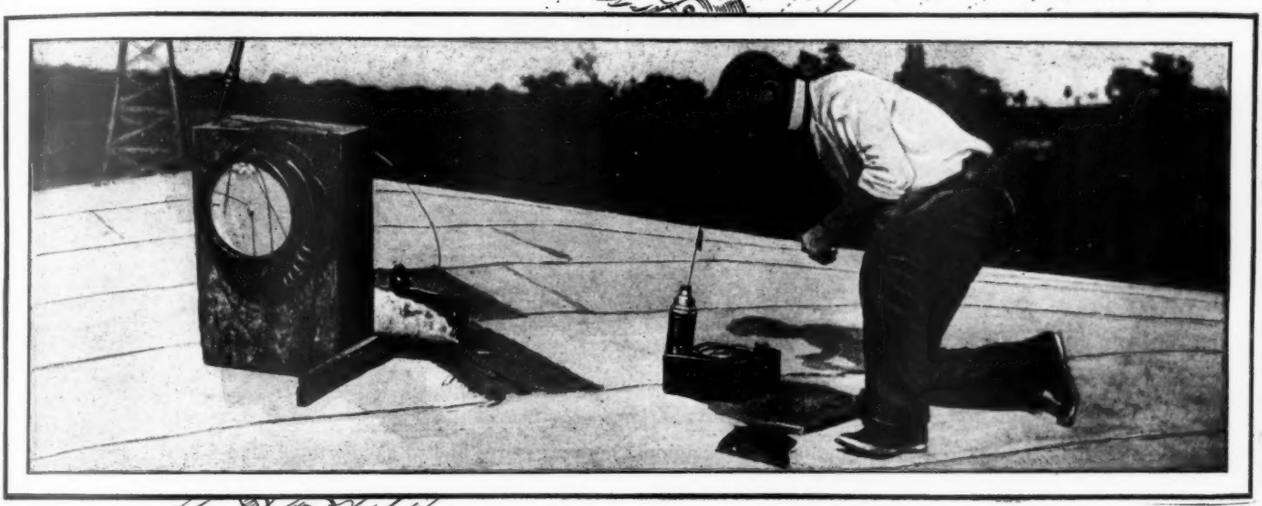

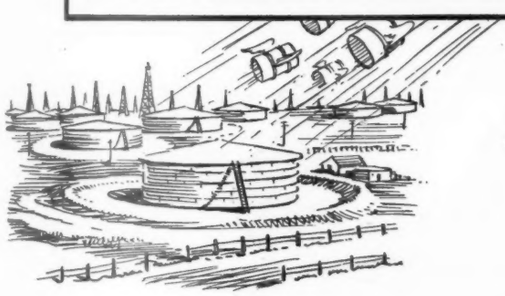

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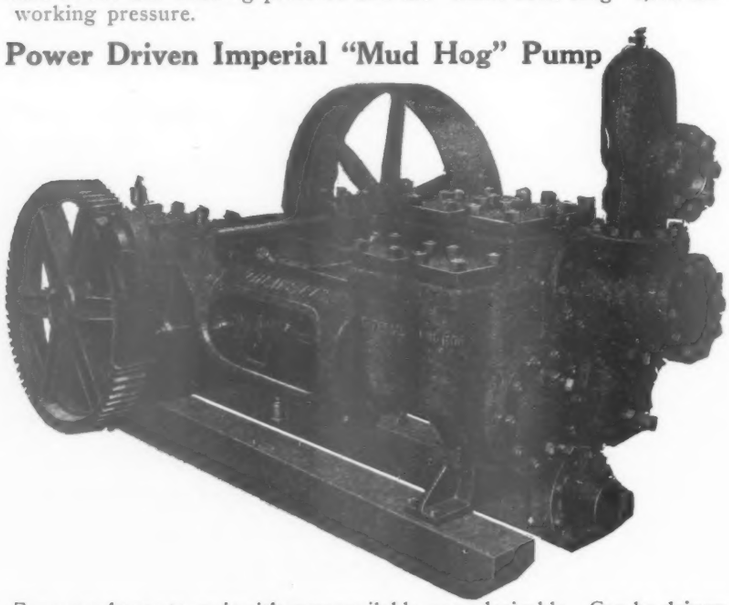

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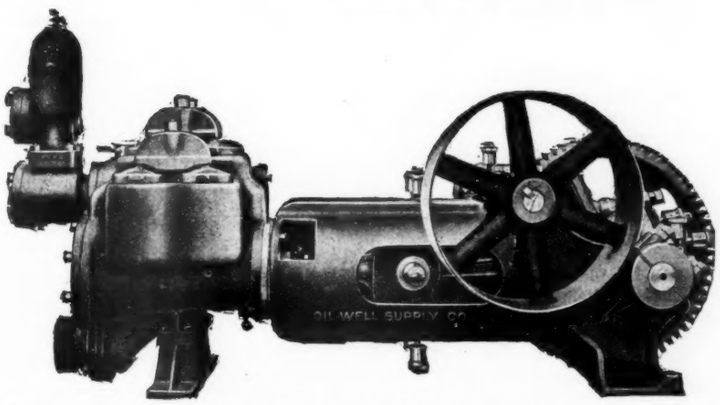
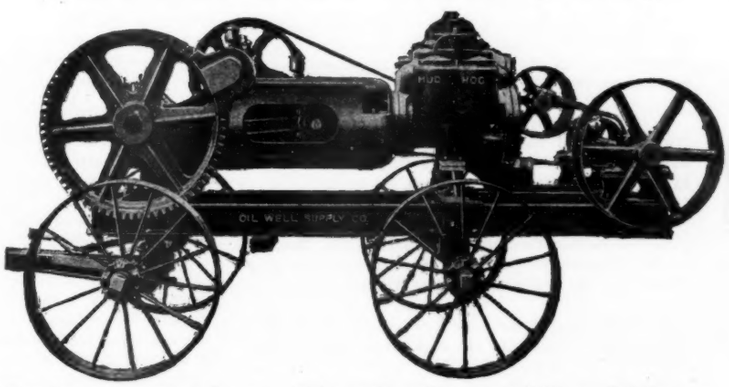
Mud Hog Pumps

Power Driven "Mud Hog" Pump



For use where steam is either unavailable or undesirable. Can be driven by any motive power, either by belt drive or gear drive. Will take care of 500 lbs. working pressure.

Portable Power Driven "Mud Hog" Pump



Can be transported from well to well and is especially useful for cementing purposes. Steam driven pumps can also be furnished in portable type.

SUPPLY CO.

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MEN IN OILDOM

E. C. Breene

E. C. Breene, a life-long resident of Oil City, Pa., has been named a member of the Board of Governors of the International Petroleum Exposition and Congress.

Although a prominent attorney and legal advisor of many oil companies and interests, Mr. Breene is also the owner of Eastern production and a director of the Winona Oil Company, of Oklahoma, with headquarters in Tulsa. He makes frequent visits to the Western oil fields, and is a familiar figure among the oil fraternity everywhere. As president of the Pennsylvania Grade Crude Oil Association, which comprises in membership all the prominent producers and refiners of the Eastern States, Mr. Breene has been busy for over two years in a campaign to advertise the superior quality of Eastern crude. He is a firm believer in publicity and in defending the integrity of the petroleum business believes that every untruthful statement made regarding the second greatest industry should be promptly and effectively answered. Mr. Breene is active in all the civic movements in his home community and is prominent in the Rotary Club.

Mr. Breene is a brother of Frank M. Breene, president of the Winona Oil Company.

PERSONAL PARAGRAPHS

John Brooks and R. E. McCort have returned to Petrolia, Ont., from the Venezuela fields.

* * *

L. E. Nebergall, inventor of the spiral stem, is in Casper, Wyo., on a business tour of the region.

* * *

F. R. Braman, representative of the National Tube Company in the Tulsa territory, returned recently to Pittsburgh, Pa.

* * *

J. W. Painter, traffic manager of the Deep Water Oil Refineries, on the Houston ship channel, is enjoying his annual vacation.

* * *

J. M. Curtis of Shreveport, La., who is operating several rotary outfits in the Rocky Mountain territory, was in Casper a short time recently.

* * *

Oscar Wolf, chief engineer of the Cumberland Pipe Line Company, has returned after a visit of two months at his old home in Germany.

* * *

R. H. Lee, of Oil City, Pa., recently visited the Texas Coastal region in the interest of the Hough Manufacturing Company, of Franklin, Pa.

R. S. Ellison, of Casper, Wyo., vice president of the Midwest Refining Company, has returned from a visit to Old Mexico, where he spent several weeks.

* * *

W. A. Bergstrom, of the Evans Oil Corporation, spent a few days in Casper, Wyo., recently, coming up from Craig, Colo., where he has been making his home.

* * *

Harry I. Miller of Chicago, sales manager for the western district with the Detroit Graphite Company, visited the Tulsa office of the company last week.

* * *

George W. Davidson, lately added to the directors of the Union Oil Company of California, is president of the Central Union Trust Company, New York.

* * *

A. V. McFadden is in Houston, Tex., en route from Tampico to Jackson, Miss. Together with associates they will drill a wildcat test south of that city.

* * *

George H. Taber, Jr., vice president of the Sinclair Refining Company, New York City, inspected the Oklahoma properties of the concern during the past week.

* * *

E. H. Aderton, field superintendent for the Producers & Refiners Corporation, has been spending considerable time recently in the vicinity of Thermopolis, Wyo.

* * *

H. P. Carpenter of Denver, Colo., sales manager of the asphalt department of the Midwest Refining Company, was in Casper, Wyo., recently on a short business trip.

* * *

T. C. Towl, superintendent of the Southwest Pennsylvania Pipe Line Company, with headquarters at Pittsburgh, Pa., is spending his vacation at Shelter Island, N. Y.

* * *

H. A. Steele, representative of the Prairie Oil & Gas Company in southwestern Oklahoma, with headquarters at Lawton, visited the Tulsa offices of the company last week.

* * *

Admiral Strauss, receiver for the Federal Government in the Teapot Dome tangle, is in Wyoming looking after the interests of the Government in the case with Sinclair interests.

* * *

Walter B. Montgomery, until recently manager for the Cumberland County Crude Oil Association, with headquarters at Burkesville, Ky., has returned to his former home in Kansas.

* * *

H. C. Fitzpatrick, superintendent of field operations for the Kasoming Oil Company, returned to Casper, Wyo., recently after starting a wildcat well in Clay Basin, northeastern Utah.

* * *

H. E. (Lon) Melat, production manager for the Gulf Production Company, at Fort Worth, Tex., is on an extended vacation to Colorado and adjoining localities. He will return about August 15.

* * *

W. B. Pyron, of the executive offices of the Gulf Production Company at Houston, Tex., made a business trip last week to the Fort Worth office of the company and then through North Texas Field.

* * *

Lee Tomlinson, representing outside oil interests at Burkesville, Ky., and secretary of the Cumberland County (Kentucky) Crude Oil Association, was called to Pittsburgh, Pa., recently on business.

* * *

James C. Brady, one of the new directors of the Union Oil Company of California, is a director of the Brooklyn Edison Company, the Central Union Trust Company, and the Maxwell Motors Corporation.

* * *

Among the visitors to the west Kentucky and Tennessee oil field districts during recent days were the following: W. P. Mason of Alliance, Ohio; Leon and S. H. Freeman of New York City, representing the Judio Oil Company, Inc.; M. C. and M. W. Hagan of Ashland, Ohio, and Ernest Porter of Monticello, Ky.

Hugh M. Craig, with the Gulf Production Company at Fort Worth, Tex., has returned from a vacation trip to San Antonio, Tex., and the vicinity.

* * *

F. J. Adams, general agent for the Gulf Production Company at Fort Worth, Tex., has returned after inspecting the company's properties in Carson and Hutchinson Counties in the Panhandle district of Texas.

* * *

Henry N. Greis, president of the Lago Petroleum Corporation, and Jacob France, president of Cosden & Company, Tulsa, headed a party of oil men that made a visit to the fields of Creek, Okfuskee, Seminole and Hughes Counties during the past week.

* * *

R. S. Mathiott, district credit manager for the Oil Well Supply Company, Shreveport, La., who has been confined to his bed for six weeks, has gone to the Mayo Brothers at Rochester, Minn., for treatment.

* * *

R. S. Sterling, chairman of the board of directors of the Humble Oil & Refining Company, Houston, Tex., has donated 16 acres of land in Chambers County, Texas, overlooking Trinity Bay as a site for a Y. M. C. A. camp.

* * *

Clarence Dillon, recently added to the directorate of the Union Oil Company of California, is a member of the firm of Dillon, Read & Company, of New York, which purchased the Royal Dutch Shell holdings of the Union Oil.

* * *

C. D. Keen and W. C. Woolf of the Shreveport headquarters of the Keen & Woolf Oil Company, spent the past week in Houston, Tex., inspecting the company's refinery on the Houston ship channel and in conference with the Houston personnel.

* * *

F. E. Bernsen, president of the Rex Machinery & Supply Company, accompanied by L. S. Allen of the B. & A. Specialty Company, Tulsa, left recently for Chattanooga, Tenn., for a short business visit with the Lucey Manufacturing Company.

* * *

Nelson K. Moody, president of the Prairie Oil & Gas Company, Independence, Kans., and A. G. Dana, vice president of the Kasoming Oil Company, Cheyenne, Wyo., were in Craig, Colo., recently inspecting the new pipe line and storage tanks at that place.

* * *

C. J. Hares, chief geologist for the Ohio Oil Company, with headquarters in Denver, Colo., who has been working the wildcat areas of Colorado and New Mexico recently, passed through Casper, Wyo., during the past week, stopping for a short visit with friends and business acquaintances.

* * *

Joseph McGill, who has been in Egypt for four years, is spending five months in Petrolia, Ont., on a furlough. Mr. McGill was in charge of the drilling operations in that country for the Anglo-Persian Oil Company. On his way home he spent a month in England and attended the Empire exhibition at Wembley.

* * *

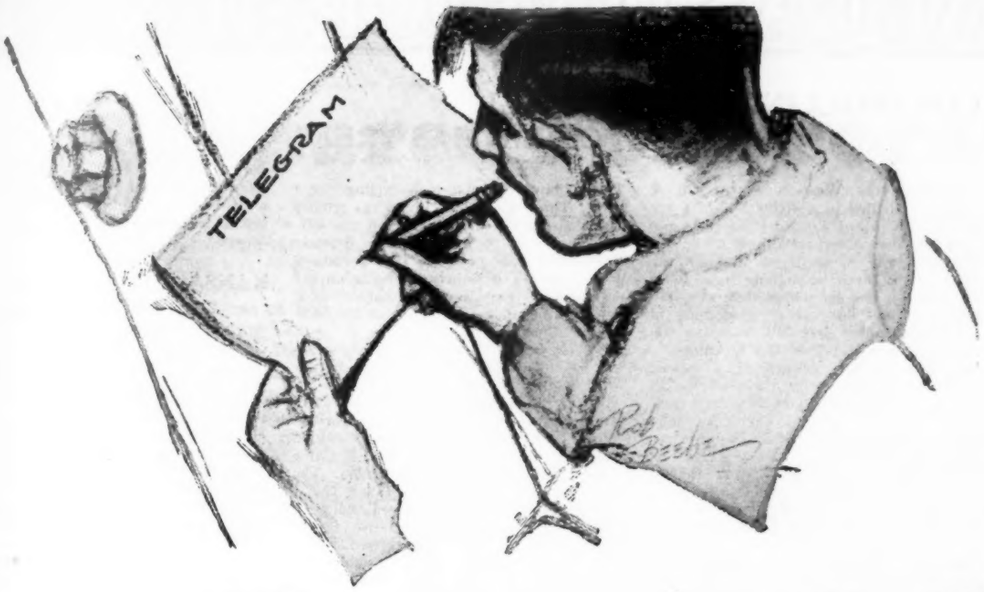
J. S. Hassan, of Westfield, Ill., has been appointed superintendent of the Ohio Oil Company in North Louisiana and South Arkansas, to succeed A. S. Warren who died three weeks ago from the effects of an operation. Mr. Hassen is an experienced oil man, having been connected with the Ohio Oil Company for more than 32 years, serving in all departments.

* * *

Jess Scarborough, formerly chief scout of the Cosden Oil & Gas Company, who was recently appointed head of the land department for that concern, and Miss Anna Belle Williams, of the insurance department of the same company, were married at the home of the bride's sister, Mrs. V. J. Hendrix, in Oklahoma City, Okla., Sunday, July 27.

* * *

H. M. Richards has recently been appointed district manager in charge of the Cleveland district office of the American Rolling Mill Company. For a number of years he was located at the home offices of the company, and in recent years has been attached to the Pittsburgh district office. J. T. Hagan, of Cleveland, Ohio, is associated with Mr. Richards in his new work.



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JONES SUCKER RODS have for years been the standard of all American Oil Fields—They give longer life—cut production costs by eliminating frequent breaks and pulling.

We maintain a corps of experienced field men who cover the East, Mid-Continent and California fields—who work with the Oil Producer to the end that JONES RODS may be made to fit every condition of service.

Do not be misled by foolish claims or mis-statements of fact—bear in mind that sucker rods as made by JONES are a technical product, designed, made and tested by engineers. The chemist, the steel man, the metallurgist, the engineer and the oil producer have combined their knowledge and skill in perfecting JONES RODS.

The steel used in JONES RODS is made of our special analysis—every heat is checked—every rod is tested.

There are no "pipes"—flaws or weak spots in JONES RODS—scientifically made—evenly balanced—they render long life—economical and dependable service under all conditions.

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THE S. M. JONES COMPANY
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Representatives Everywhere There's Oil

JONES ACME Steel SUCKER RODS

NATURAL GAS DEVELOPMENTS

Doherty Companies Buy Kansas City Gas And Wyandotte Gas

Henry L. Doherty & Co. announces that the Cities Service Co., of which the Empire Gas & Fuel Co. is the chief Mid-Continent subsidiary, has acquired a majority interest in the common stock and a large block of the preferred stock of the Kansas City Gas Co. of Kansas City, Mo., and the Wyandotte County Gas Co. of Kansas City, Kans., which serves in these two cities, a population of approximately 500,000. While no purchase price was mentioned, recent valuations of the companies approximated $15,000,000.

The Kansas City Gas Co. was incorporated in 1906 in Missouri and in 1920 purchased the property of the Kansas City, Mo., gas company. It supplies natural gas in Kansas City, Mo., where it operates without competition and serves an estimated population of more than 350,000 persons. Before 1907 the company supplied manufactured gas but since then it has distributed natural gas. The company has a franchise unlimited as to time and subject to reasonable regulation and has authorized and outstanding $812,500 common stock, $4,217,000 8 per cent cumulative first preferred and $1,600,000 noncumulative second preferred, while its funded debt consists of $2,463,500 first gold 6 per cent bonds which are due to mature in 1942.

The Wyandotte County Gas Co. was incorporated in 1908 in Kansas as a successor to the Wyandotte Gas Co. It supplies without competition a population of more than 110,000 in Kansas City, Kans., and Rosedale. The capital stock consists of $187,500 common stock, $300,000 6 per cent first preferred stock, $400,000 second preferred stock, all outstanding, while the funded debt is $1,548,000 first gold 6 per cent bonds, due November 1, 1924.

The active officers of the companies, George E. Nicholson, Charles W. Green, M. J. Barry and W. H. McKenzie, will remain in their present positions. Mr. Nicholson who remains as president, issued the following statement:

"During the past two years the owners of the Kansas City Gas Co. have had under consideration the ever increasing problem of meeting the gas requirements of Kansas City. The best gas experts in the United States were engaged and a full investigation and report made covering the situation. Among recommendations made was one providing for a large artificial gas producing plant at a cost of many millions of dollars, which in turn would mean a substantial increase in the price of gas. This we desired to avoid.

"Both from the standpoint of the city's and the stockholders' protection it was necessary that some definite arrangement be made looking to a permanent supply of gas not only for the present, but also the future. This desire led to a conference with Henry L. Doherty, owner of the Kansas Natural Gas Co. property and the owner of large acreage of natural gas territory in Kansas, Oklahoma and Texas with lines reaching out to the various fields. At present we are buying gas from the Kansas Natural Gas Co. on the open market and have no contract for any definite period. As a result of numerous conferences with Mr. Doherty, his company has become substantially interested in the Kansas City Gas Co. and the Wyandotte County Gas Co. of Kansas City, Kans.

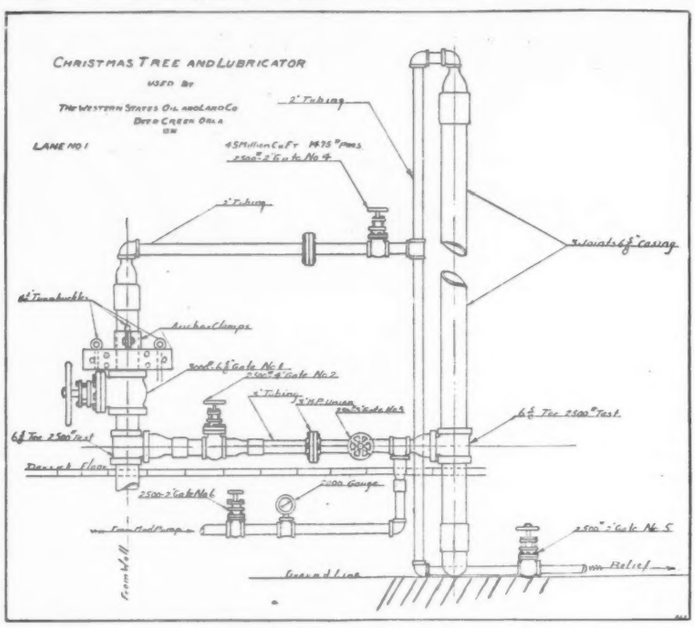
GAS FOR CYRIL, OKLA.

The Anadarko Oklahoma Gas Co. has a franchise for 25 years with Cyril to furnish gas for fuel and power. The work of laying mains and erecting buildings and equipment will start imediately, according to officers.

CONTROLLING BIG GAS WELL WITH A "CHRISTMAS TREE"

Recently the Western States Oil & Land Co. drilled in a 40,000,000-foot gas well at a depth of 4,032 feet on the Lane farm at Deer Creek, Oklahoma. When this gas was encountered it blew the tools out of the hole, sending them twice as high as the derrick, which was 110 feet high and left the stem sticking in the ground about 100 feet from the rig. As the Western States Oil & Land Co. has more gas than it can sell, it seemed to be advisable to shut the well in, fill the hole with mud-laden fluid and continue to drill until through the sand and a landing spot was reached for the 4¾-inch pipe.

"It has been our experience that a Christmas tree similar to the accompanying sketch is very satisfactory," said A. V. Fletcher, superintendent. "In this particular case the Christmas tree consisted of a 6⅝x6¼ swage nipple with the 6⅝-inch end up. Onto this was screwed a 2,500-lb. test tee, straight ended. Into the side opening a 6⅝x4-inch swage nipple and a 2,500-lb. 4-inch gate. Into the top of the tee was a nipple, than a 3,000-lb. 6⅝-inch gate and then another nipple. The Christmas tree was made up altogether outside of the derrick and then pulled in and placed over the hole leaving the 6⅝-inch gate open and the 4-inch gate closed. After the Christmas tree was screwed into the collar it was anchored down with two sets of 6⅝-inch anchor clamps and four 1¼-inch turnbuckles. The well was then shut in by closing gate No. 1 and showed a pressure of 1,475 pounds. The practice in some places is to put a master gate directly onto the well, but we have found that these large gates will freeze and stick, which makes it advisable to have the 4-inch gate fall back on, should such a case arise, in order to relieve the pressure on the well. Incidentally, while the well was blowing open it could be heard 14 miles away. In order to protect the ear drums of the crew, cotton soaked in sweet oil was put in the ears, then a large piece of cotton over the ears and held in place by a bathing cap.


CHRISTMAS TREE AND LUBRICATOR
USED BY
THE WESTERN STATES OIL AND LAND CO
DEER CREEK OKLA
LANE NO 1
2" Tubing
4 5/8 Million Cu Ft 1475 # PRES
2500 # 2 Gate No 4
2" Tubing
3 Joints 6 5/8" casing
Anchor Clamps
6 5/8 Tee 2500 # Test
2500 # 2 Gate No 5
Ground Line

Controlling Big Gasser With "Christmas Tree"

Lubricator Rigged Up

"After the well was shut in a lubricator was rigged up as shown by the sketch. Three joints of 6⅝-inch casing were used. These were made up on the ground and then raised and leashed on the outside of the rig to the leg of the derrick. The sketch does not show the necessary swings due to the lubricator being on the outside of the rig, but they consist of a few ells and nipples depending on the location of the lubricator.

"When the lubricator was all connected the 4-inch gate marked No. 2 was slightly cracked, No. 3 open and Nos. 5 and 6 closed. This tested out all fittings without giving the volume should any break. After this No. 4 was opened which equalized the pressure on No. 1 which allowed it to be opened quite easily. The next step was to close No. 4 and No. 3 and open No. 5 which relieved the pressure on the lubricator. Then No. 6 was opened and the mud hog started which filled the lubricator. When the lubricator was full No. 5 and No. 6 were closed. Then No. 4 was opened very slowly to prevent water hammer. After the well pressure was all on, No. 3 was opened, which allowed the mud laden fluid to run down the well and the gas displaced to fill the lubricator. Then No. 4 and No. 3 were closed and No. 5 opened and the performance repeated. We have had considerable trouble with gates freezing. This was due to slight leaks around the stuffing boxes which allowed the gas to expand from 1,475 pounds to atmosphere pressure. To overcome this the gates were wrapped with sacks and steam turned on very slightly to give as even expansion as possible.

"We have used the herein described lubricator and have found it much more satisfactory than one erected over the well or inside of the derrick."

Blown Out Three Times

This well has blown the tools out of the hole three times, twice unintentionally and once intentionally. On the latter occasion the tools were dropped into the ground and remained upright 100 feet from the derrick. At one time a bailer was in the hole and the bail had been jarred off. A spear was used but the bailer could not be loosened. The gas was being held don with mud and water and when the tools could not be removed the Christmas tree was put on and bailing was started until the mud came out. Five joints of pipe were put on the casing giving an outlet above he derrick and the well was opened. Twenty minutes later the tools and bailer came out and went 500 feet in the air, becoming imbedded vertically in the earth as they dropped.

KANSAS TOWNS TO GET GAS FROM BLACKWELL

Gas from the Blackwell district, comprising the Deer Creek, Vernon oil and gas pool and the Otstot Pool, northwest of Blackwell may heat homes in Enid, Numa, Medford, Caldwell, Wichita, Hutchinson, and other smaller Kansas cities and towns next winter. Negotiations are reported under way and awaiting the approval of the Kay County Gas Co., whereby the Kansas Gas & Electric Co. is to take 10,000,000 feet of gas per day at the present time and more during the winter months from wells in the Otstot Pool, at a price of 8 cents per thousand feet at the wells. Wells in the Blackwell district have a potential open flow of 380,000,000 feet per day.

Gas is being piped from the Deer Creek Pool by the Deer Creek Gas Co. to refineries at Enid and is also sold to the local distributing company there to heat homes and offices. The same company is reported to have leased ground at Deer Creek to build a plant to treat casinghead gas, as the gas is said to be rich in gasoline content. The plans for the plant, it is said, call for completion this fall. It is reported that J. H. Handler has bought gas from the Western States Oil & Land Co. at Deer Creek and is almost ready to lay a line through Numa, Medford, Renfrow and to Caldwell, Kans.

It is understood that an 8-inch line is to be laid from the Vernon oil and gas pool to refineries at Arkansas City. This area is 15 miles northeast of Blackwell and is the latest shallow gas pool opened in Kay County, the well having a potential open flow of around 50,000,000 feet. The gas is owned by Blackwell people and the Carter Oil Co. The Kansas Gas & Electric Co., it is understood, will lay a 12½-inch line from Blackwell through Wellington and to Wichita and Hutchinson with laterals to smaller cities and towns, and may erect a plant to treat casinghead gas in the future in the territory northwest of Blackwell.

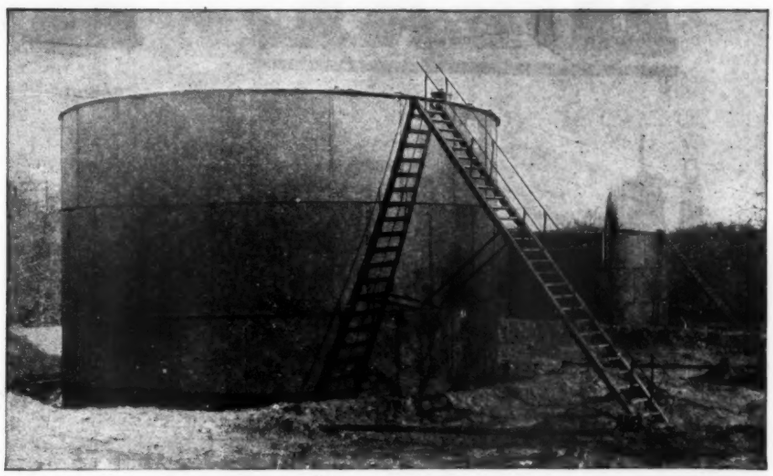
There are six wells in the Otstot Pool having a potential open flow of 130,000,000 feet of gas per day, encountered in sands from 700 to 3,400 feet from where gas is now produced. The present area is 1 mile in width by 1½ miles in length, with every indication of extending from 25 to 30 miles southwest through the western edge of the Tonkawa Field and to Garber and Billings, as the same gas was found in the Alcorn Oil Co.'s No. 1 North, in 12-26-2w, in a sand at 2,537 to 2,543 feet, with 30,000,000 feet production. The total open flow of the district, including the Vernon Oil & Gas, Deer Creek and the Otstot Pool is 380,000,000 feet of gas per day. District operators and producers have heretofore been without a market for their gas, but completion of pipe lines proposed will provide them a steady market for a number of years as well as an income to exploit and develop their acreage for both oil and gas.

VERY SHALLOW GASSER

One of the most unusual gas wells yet found in southern Oklahoma is the Sykes, Heenan & Coe No. 1 Reed, in the NW cor. NW 19-7s-5w, which, at 647 to 687 feet was making 32,000,000 feet of gas with a rock pressure of 300 pounds. Gassers of such proportions at such a shallow depth are infrequent.

Prepared For Proration

Reproduced here is an actual photograph of two 3-ring 5,000 barrel Columbian Bolted Steel Tanks, on a lease of the Imperial Refining Company, Healdton Field. Imperial is prepared for proration. Note in particular the neat, sturdy Columbian Safety Steel Stairways. These are furnished with all Columbian 5,000 and 10,000 barrel Improved Bolted Steel Tanks.



Columbian 5,000 and 10,000

Improved, Portable, Bolted Steel Tanks Have Same Factor of Safety as Standard 55's

Truck Tanks
Oil Field Tanks
Bulk Station Tanks
Underground Tanks
Floating Tank Decks
Barrels, Buckets
Carrying Cans, Funnels
Faucets, Valves
Oil and Gasoline Pumps
Plates, Sheets, Angles

Prime steel plates of the correct weight and improved design and construction give Columbian 5,000 and 10,000 barrel portable bolted steel tanks the same factor of safety as standard 55,000 barrel tanks. With a set of Columbian specifications your engineers can verify this fact mathematically. And they can check up hundreds of Columbian five and ten thousands giving dependable service in every major oil region.

As usual, when the need is greatest, Columbian can make immediate shipment on 5,000 and 10,000 barrel tanks. Before proration backs oil up on you, get in touch with Columbian direct or with the outposts of Columbian service listed at the left.

Buy Columbian Improved five and ten thousands with all the assurance of big storage safety and with the additional advantage of portability. Columbian fives and tens can be cut down and reset without damage, without decrease in capacity and with comparatively small expense.

Vapor Tight construction is standard on all Columbian Improved Bolted Steel Tanks. All sizes from 65 to 10,000 barrels inclusive are equipped with the improved lap joint deck, scientifically designed to prevent evaporation loss.

Columbian Vapor Pressure Bolted Steel Tanks (200 and 500 barrel) hold primacy among flow tanks. Built of 12 gauge steel throughout with ample interior reinforcement and carrying as much as 2 pounds pressure—they effect tremendous savings in retained gas and increased gravity.

In or near every active oil field there is a Columbian Dealer-Erector organization trained and maintained to serve your field and refinery storage needs. More than 40,000 Columbian Bolted Steel Tanks, in almost every oil region of the world, stand in testimony of Columbian worth and service.

Outposts of Columbian Service

At all these points Columbian maintains branch offices—at some warehouses. Sales engineers of experience and ability are in charge. In addition Columbian Dealer-Erectors with trained forces are located in or near all the active oil fields. Here is a complete contact organization completely at your command.

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Owasso and Frisco Tracks

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564 Market Street

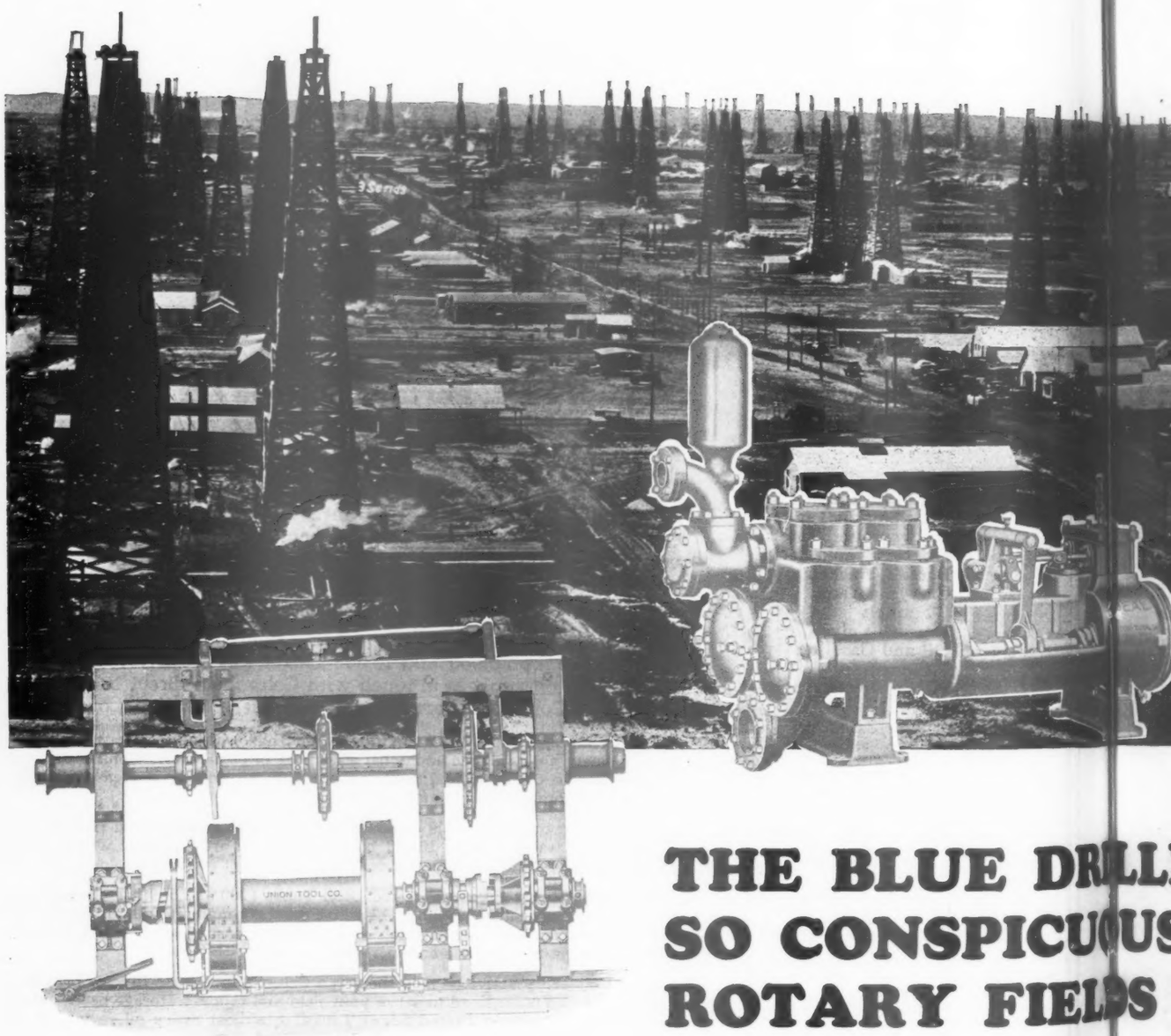
CASPER, WYOMING
321 Moose Bldg.

COLUMBIAN STEEL TANK COMPANY

EST'D 1894

1405-1625 WEST 12TH STREET KANSAS CITY, MISSOURI

IDEAL ROTARY

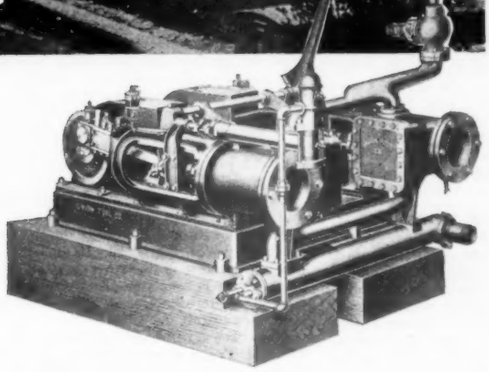


THE BLUE DRILL
SO CONSPICUOUS
ROTARY FIELDS

NSCO

THE NATIONAL SUP

RY EQUIPMENT



ORILLING EQUIPMENT
UOUS THRUOUT THE
ELDS IS IDEAL

SUPPLY COMPANIES

NSCO

EQUIPMENT AND SUPPLIES

BENTUBE EVAPORATOR FOR DISTILLED WATER

The new Griscom-Russell bentube evaporator is designed for the production of pure distilled water for boiler feed makeup. This method of water purification eliminates all scale-forming material from the water before it enters the boiler, thus considerably improving plant operation.

The essential features of construction are a shell and vapor dome of welded plate, with tube headers of cast iron into which are expanded seamless drawn Admirality tubes which are bowed. The steam enters the tubes and evaporates the raw water in the shell. These bowed tubes distort with temperature changes, effectively cracking off accumulated scale. The tube bundle consists of a series of independent vertical sections, each easily removable for inspection.

The G-R bentube evaperator is manufactured by the Griscom-Russell Co., the manufacturers of the well known Reilly evaporator. The G-R bentube evaporator is fully described in their Form 195, which has just come from the press.

TO MAKE DEEP TESTS IN MAXBURG FIELD

MARIETTA, Ohio, August 2.—The Washington-Noble County Oil & Gas Co., has been formed to make two deep tests in the Old Maxburg Field. Rigs are up and the hole will be spudded at once on the Bodin-Aiken farm. It is the intention of the contractor, Earl Stephens, to drill each well to the Clinton formation, or an approximate depth of 6,000 feet.

Heavy International steel derricks are being used on these tests while all other equipment is being supplied by the Leidecker Tool Co. The operating company holds leases covering 8,000 acres in this area.

Another deep test is being made at Bell Valley for the Ohio Fuel Co. Earl Stephens took the contract for the well after a depth of 4,300 feet had been reached. He intends to carry it 1,700 feet further. The 4,300-foot depth was reached in 57 days' drilling time, with the use of Leidecker No. 24 drilling machine.

PLACE A REPEAT CONTRACT

The Worthington Pump & Machinery Corp., 115 Broadway, N. Y., have placed a repeat contract with The Austin Co., Engineers and Builders, Cleveland, Ohio, for the construction of a new unit at its Buffalo branch plant. The contract calls for a pattern storage building 80 by 200 feet, two stories high. Construction and all purchases are handled through the Cleveland office of the Austin Co.

ADDS NEW UNIT TO PLANT

The Fisher Governor Co., manufacturers of power plant specialties, is adding a new unit to its plant at Marshalltown, Iowa. This concern reports good business and steady growth during recent years. The unit now under construction is the third addition to the original plant within eight years. The upper floor of the new unit will be devoted entirely to office space and the lower floor will be given to the shipping and machine departments.

OPENS NEW HEADQUARTERS

The Guiberson Corp. of Dallas, Tex., has opened up a new headquarters in a new building at First and Elwood Sts. in Tulsa, where it has installed an emergency stock of equipment handled by the concern, including packers, tubing catchers, oil savers, plugs and underreamers. This is the first time the concern has carried an emergency stock in Tulsa. The former headquarters were located in the Daniel Building.

OIL COUNTRY GOODS PRICES HOLD; HEAVY LINE PIPE BUYING IN JULY

By B. E. V. Luty

PITTSBURGH, Pa., August 4.—In the steel market, taken as a whole, there is a slight increase in the total volume of buying, just enough to be noticed. Mill operations are not materially increased, but are somewhat steadier, and it looks now as if July would prove to be the low month of the year in production, at 40 to 45 per cent of capacity. This, moreover, is distinctly above the forecasts that were being made for July a couple of months ago. Steel prices are not improved. The steel products that have declined from last year's level show further softening tendency, but the lines that have had no decline, rails, pipe and tin plate, are as firm as ever.

The pipe mill position is much improved in the past fortnight, both as to operations and as to price prospects, this charge being due entirely to the booking of line pipe, for ordinary oil country goods, including casing, are slightly less active and demand for merchant pipe has shown no improvement.

Beginning with some 80,000 tons of line pipe booked in May and June, the bulk of this going to the National Tube Co., there was heavy line pipe buying last month. As reported a week ago, the Gulf Refining Co.'s line, 500 miles of 8 and 10-inch, is understood to have been placed, involving about 75,000 tons, and a slightly larger tonnage is involved in other orders, including some export business, so there seems to have been more than 150,000 tons of line pipe booked in July, making in the neighborhood of 250,000 tons in three months, against scarcely anything in the preceding six months.

Orders in Rotation

The orders were taken more or less in rotation by the mills, so that the independents are well supplied. Presumably it was the knowledge that the steel industry was anxious for tonnage that brought out the line pipe business at this time. While close prices were made it is understood that the business will prove fairly remunerative. Being now comfortably filled, the mills are stiffer on line pipe quotations, there being a moderate amount of inquiry still out.

This line pipe business, with the aid of a fair amount of casing and a little O. D. pipe and large sizes of merchant pipe, is giving the lap weld furnaces practically a full operation. Demand for merchant pipe continues rather light and the butt weld furnaces are about one-half engaged. Operations of the pipe mills as a whole may be estimated at fully 75 per cent, with some mills probably running above this.

Prices on oil country goods generally, and on merchant pipe, continue to be strictly maintained by mills, on the basis of the lists of April 19, 1923. As the pipe mills now have such a good operation there is less prospect of price cutting than there was, and pipe prices may hold indefinitely.

The "cease and desist" order of the Federal Trade Commission in the Pittsburgh Plus case against the United States Steel Corp., names bars, shapes, plates, wire products, sheets and tin plates, while pipe and oil country goods, though sold on what is essentially the Pittsburgh Plus principle, are conspicuous by their absence. This has attracted no attention in the trade, and indeed the trade has given little thought to the whole matter, evidently not expecting that the order will be supported by the courts.

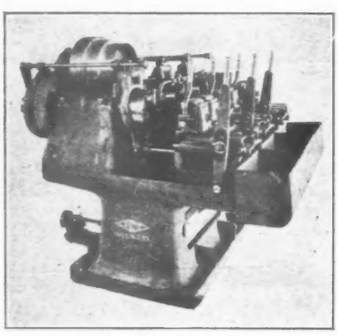
The sheet market is a trifle more active and at the same time prices are a little easier, as 2.70c on blue annealed, 3.50c on black and 4.60c on galvanized sheets are occasionally shaded. Prices are also easier, the former quotation of 2.15c, Pittsburgh, being frequently disregarded, with sales made down to 2.00c. There is a moderate volume of oil storage tank business going through the market, but nothing of any particular size.

The semifinished steel market, on billets, slabs and sheet bars, is practically untested, there being scarcely any inquiry. Sheet bars seem to be quotable at $38, rather than the old figure of $40. Rolling billets are nominal at $38, and with the usual $5 differential this would make forging billets $43. Pittsburgh or Youngstown, but it is not improbable that prices would be shaded on an attractive inquiry.

NEW THREAD CUTTING MACHINE ON MARKET

The Landis Machine Co., Inc., Waynesboro, Pa., has placed upon the market a new thread cutting machine, which will be known as the Landis bolt factory threader. This machine is designed and built for use in bolt factories, or in plants where a high production of bolts is required. This machine is sturdily constructed and will give a long life of hard service under high pressure conditions.

It is made in the 1-inch and 1½-inch sizes in the double and triple head types and in the 2-inch size in the double head type. The spindles on the machine are located sufficiently close together to permit of an operator handling a three head machine without shifting from one lever to another. The spindles are independent and are controlled by the clutches located



Landis bolt factory threader.

at the rear. The clutches are operated by bars extending over the die heads. Any one head may be stopped without shutting down the entire machine.

The die head is opened and closed automatically. The tripping rods which connect the carriage and the yoke of the die heads for opening and closing them, are provided with stop collars. These collars are conveniently and quickly adjusted for various lengths of threads. All spindle gears have bronze bushings. The main bearings are capped and may be adjusted for any wear.

The carriage drive is in the center and comprises a rack and segment gear. These are thoroughly protected against dirt and chips. The levers operating the carriages are adjustable through a V-toothed clutch. This permits of a convenient position of the levers when cutting different lengths of thread. The levers may also be quickly changed from one side to the other side of the carriage for right or left hand operator.

The carriages on the machines are furnished with either bolt holders or vise grips. The bolt holders or vise grips are easily taken off and applied quickly. Both have horizontal as well as vertical adjustment so that the work may be in proper alignment at all times. This is an exclusive feature on the Landis machine and insures good results throughout its entire life. The vise grips are lever operated which facilitates production. The grips which are separate from the sliding jaws are hardened and are quickly changed without disturbing any adjustments. This is a pronounced advantage also. The illustration shows the machine with the carriages equipped with vise jaws.

The machines are furnished with boxes for holding the bolts. These boxes are placed on the front of the machine and will not interfere in any manner with the operator. These boxes may be removed when threading long bolts. A geared oil pump supplies an abundant flow of lubricant to the die head. All gearing and moving parts are protected so as to eliminate any danger of accident. These machines employ the well known Landis die heads and long life Landis chaser.

NEW SPUR GEAR SPEED TRANSFORMER READY

The Hill Clutch Machine & Foundry Co., Cleveland, Ohio, has developed the "industrial type" spur gear speed transformer, realizing the urgent need for an efficient and durable speed changing device for such service as is encountered in connection with conveyor drives, in mills, mines, smelters, steel plants, refineries, and in fact for all general industrial work where speed transformer units are operated under continuous or heavy service conditions; in other words, something substantial to meet the every day rough usage of mill operation.

The "industrial type" speed transformer consists of a nest of plain spur gears revolving in oil, changing the revolutions per minute of the input shaft to some desired revelutions per minute of the output shaft. The power transmitted is the same in both shafts. The efficiency is said to be higher than any other form of gearing. The gears all have 20 involute form cut teeth. The short length of these teeth combined with their powerful cross section insures great strength and reliability.

Of great importance is the central housing located in the main frame. With this construction it is possible to offer the trade a gear transformer having both high and low speed shafts supported in double bronze bearings, insuring strength, rigidity and quiet operations. The manufacturers have also provided for ordinary thrust conditions.

Great accessibility is obtained as the cap and both ends can be quickly removed. The oiling arrangement is unique, being a continuous and thorough splash system lubrication obtained by a metal disc on the high speed shaft which automatically lubricates every gear and bearing in the case. The entire unit is enclosed, dust-proof and leak-proof.

Both high and low speed shafts are in identical axial alignment. The action is positive and both shafts revolve in the same direction.

The "industrial type" speed transformer is made in seven sizes. Each size has a number which bears a fixed relation to the diameter of the low speed shaft. The number also indicates the horsepower the low speed is capable of safely transmitting at 100 R.P.M.

It is the "short cut" from electric motor to machine or from shaft to shaft where speeds are widely different. It eliminates cumbersome speed changing devices, saves power losses and being a closely coupled unit requires very little space for installation.

TANK CAR CONTRACT

The Standard Tank Car Co., Sharon, Pa., has been awarded the contract for the construction of two new 8,050-gallon tank cars for the Caddo Central Oil & Refining Co.

Wertzberger Trade Mark Copyrighted 1924

The above Trade-Mark is symbolical of Quality in Derricks. It represents the last word in derrick construction.

Wertzberger Derricks are of original design, built to stand the hardest drilling and pulling jobs. They are capable of drilling to the greatest depths known today.

The Safety features built into the Wertzberger Derrick are a most progressive step.

Look for the Wertzberger Trade-Mark.

Wertzberger Derrick Co. **Tulsa, Okla.**

PRODUCTION IN MEXICO IS INCREASING

(Continued from Page 64)

Production in 1923 by companies is given in Table 7.

Total exports, including bunker oil loadings, from Mexico in 1923 were 135,575,534 bbls., shipped from the export zones as follows: 122,152,957 bbls. from Tampico, 11,871,803 bbls. from Tuxpam and 1,550,774 bbls. from the Isthmus. The largest exporting company was the Huasteca, which shipped 32,152,040 bbls. Corona ranked second with 21,587,658 bbls., Transcontinental third with 16,752,446 bbls. and the Aguila (Mexican Eagle-Royal Dutch) fourth with 13,213,019 bbls. Exports by zones and companies are shown in Table 8.

Exports from Mexico in 1923 were divided as follows: Heavy crude, 64,002,838 bbls.; light crude, 14,104,721 bbls.; total crude, 78,107,559 bbls.; fuel oil, 48,617,681 bbls.; gas oil, 243,920 bbls.; crude gasoline 4,649,832 bbls.; refined gasoline, 2,213,828 bbls.; crude kerosene, 150,778 bbls.; refined kerosene,

TABLE NO. 4
Petroleum Produced in Mexico, March, 1924, by Companies
(Stated in barrels.)

Companies—	Crude— Heavy	Light	Total	Pct.
Aguila El Cia Mex. de Pet.	.....	504,326	504,326	3.7
Agwi Cia Petrolera del	.....	90,947	90,947	0.7
Atlantica, Cia. Prod. y R.	.....	38,822	38,822	0.3
Azteca, Cia. de Petroleo	.....	6,592	.6,592	0.0
Brings Lufft S. en C.	46,269	.....	42,269	0.3
Capuchinas Cia. de Pet.	.....	61,868	61,868	0.5
Consolidated Oil Fields	7,284	.....	7,284	0.0
Continental Mex. Pet. Co.	3,497	1,390	4,887	0.0
Corona La. Cia. Mex. Holland	866,983	79,455	946,437	6.9
Cortes Oil Corp.	.....	10,957	10,957	0.1
C. V. Schlact	.....	2,522	2,522	0.0
D. A. Williamson	41,074	.....	41,074	0.3
English Oil	11,467	.....	11,467	0.1
East Coast Oil Co.	495,325	.....	495,325	3.6
Espuela Oil Co.	28,299	.....	28,299	0.2
E. W. Price	.....	.....	.....	...
Ferrocarriles N. de Mex.	118,340	.....	118,340	0.9
Financiera de Petroleo	26,802	.....	26,802	0.2
Franco Espanola	705	.....	705	0.0
Giralda La. Cia. de Pet.	623	.....	623	0.0
Globe Pet. Co.	16,360	.....	16,360	0.1
Gonzales y Meriweather	.....	48,974	48,947	0.4
Hispano Cubana, Cia. de P.	.....	2,831	2,831	0.0
Huasteca Petroleum Co.	.....	2,331,332	2,331,332	17.0
H. G. Venable S. en C.	3,441	.....	3,441	0.0
Imperio, Cia. de Gas y Com.	787,848	.....	787,848	5.7
Indiana Mexicana Cia. de P.	.....	4,585	4,585	0.0
International Pet.	1,376,680	221,112	1,697,792	11.7
Inversiones Pet. Cia. Mex.	.....	31,041	31,041	0.2
Ita. Mex. Oil Co.	31,840	.....	31,840	0.2
J. F. White	9,378	.....	9,378	0.1
J. D. Lavin	9,592	.....	9,592	0.1
Kern Mex. Oil Fields	497	.....	497	0.0
Kone Willis	162,112	.....	162,112	1.2
Maritima La. Cia. de Pet.	2,409	.....	2,409	0.0
Meridional La. Cia. de Pet.	132	.....	132	0.0
Mexican Atlas	56,358	.....	56,358	0.4
Mexican Conde	.....	.....	.....	...
Mexicana de Pet. El Sol	136,933	.....	136,933	1.0
Mexico y Espano Cia de Pet.	.....	.....	.....	...
Mexican Gulf Oil Co.	1,184,627	196,355	1,380,982	10.1
Mexico Cia. Nac. de Pet.	6,894	.....	6,894	0.0
Mexican Sinclair Pet. Corp.	185,429	14,498	199,927	1.5
Mexicana de Pet. S. A.	286,547	.....	286,547	2.1
Mexican Oil Co.	.....	.....	.....	...
Mexicana de Combest	15,964	4,460	20,424	0.1
National Oil Co.	13,039	.....	13,039	0.1
New England	280,069	.....	280,069	2.0
Norman Mex.	11,347	.....	11,347	0.1
Otontepec Cia. de Pet.	.....	7,718	7,718	0.1
Panuco Boston Oil Co.	65,680	.....	65,680	0.5
Penn. Mex. Fuel Co.	.....	107,125	107,125	0.8
R. B. Cochran	7,686	.....	7,686	0.1
Richmex Pet. Co.	1,127,476	.....	1,127,476	8.2
R. G. Piper S. en C.	.....	3,636	3,636	0.0
Tal. Vez. Cia. Pet.	1,195	.....	1,195	0.0
Tampico Amatlan	.....	805	805	0.0
Tampico Bancking	2,453	.....	2,453	0.0
Tampico Panuco	1,981	.....	1,981	0.0
Texas Co. of Mexico	164,918	22,713	187,631	1.4
Transcontinental de Pet.	2,143,789	62,045	2,205,834	16.1
Vincent and Batte	.....	79,292	79,292	0.6
Veracruz Mexico Cia. Pet.	40,218	.....	40,218	0.3
Total	1,554,779	3,934,401	13,713,961	100.0

TABLE NO. 8
***Exports of Petroleum and Derivatives from Mexico, 1923 by Companies and Export Zones**
(Stated in Barrels)

Companies—	Tampico zone	Tuxpam zone	Isthmus zone	Total
Aguila El. Cia. Mex. de Pet	10,090,770	1,571,475	1,550,774	13,213,019
Agwi Cia. Petrolera del	.....	2,388,615	.....	2,388,615
Continental Mex. Pet. Co.	210,464	.....	.....	210,464
Corona La. Cia. Mex. Holand	21,587,658	.....	.....	21,587,658
Cortes Oil Corp.	.....	250,927	.....	250,927
Chadick y Cia.	1,195,402	.....	.....	1,195,402
East Coast Oil Co.	8,401,509	.....	.....	8,401,509
Freeport and Mex. Fuel Oil	10,504,306	.....	.....	10,504,306
Huasteca Pet. Co.	32,152,040	.....	.....	32,152,040
Imperio Cia. de Gas y Comb.	1,959,241	.....	.....	1,959,241
Interocean Oil Co.	633,950	.....	.....	633,950
Internacional de Petroleo	621,031	2,748,182	.....	3,369,213
Metropolitan de Oleod	.....	143,406	.....	143,406
Mexican Atlas Pet. Corp.	27,902	.....	.....	27,902
Mexican Crude	17,058	.....	.....	17,058
Mexican Gulf Oil Co.	7,852,920	.....	.....	7,852,920
National Pet. Corp.	337,804	.....	.....	337,804
New England Fuel Oil Co.	3,599,465	.....	.....	3,599,465
Panuco Boston Oil Co.	458,988	.....	.....	458,988
Pierce Oil Corp.	961,854	.....	.....	961,854
The Texas Co. of Mexico	5,307,382	3,746,230	.....	9,053,612
Transcontinental de Pet.	15,729,478	1,022,968	.....	16,752,446
U. S. Mex. Oil Corp.	503,735	.....	.....	503,735
Total	122,152,957	11,871,803	1,550,774	135,575,534

*Includes bunker oil loadings.

TABLE NO. 7
Production of Petroleum in Mexico in 1923 by Companies and Producing Zones
(Stated in Barrels)

Companies—	Tampico zone	Tuxpam zone	Isthmus zone	Total	Pct.
Aguila El Cia. Mexicana de Petroleo	.....	10,142,625	3,780	10,146,405	6.8
Agwi Cia. Petrolera del	.....	1,892,466	.....	1,892,466	1.3
Atlantica La. Cia. Prod. y Refinadora de Pet	.....	199,267	.....	199,267	0.1
Brings & Lufft, S. en C.	710,147	.....	.....	710,147	0.5
Capuchinas Cia. Petrolera	.....	994,172	.....	994,172	0.7
Corona La Cia Mex. Holandesa de Pet	29,646,556	1,021,006	.....	30,667,562	20.5
Continental Mex. Pet. Co.	85,865	24,361	.....	110,226	0.1
Consolidated Oil Fields Corp.	71,429	.....	.....	71,429	0.0
Cortes Oil Corp.	.....	168,572	.....	168,572	0.1
East Coast Oil Co.	3,402,418	.....	.....	3,402,418	2.3
English Oil Co.	146,494	.....	.....	146,494	0.1
Espuela La. Oil Co.	464,466	.....	.....	464,466	0.3
Financiera de Petroleo	146,960	20,379	.....	167,339	0.1
Freeport & Mexican Fuel Oil Co.	1,742,972	.....	.....	1,742,972	1.2
Ferrocarriles Nacionales de Mexico	172,000	.....	.....	172,000	0.1
Gonzales y Meriweather	.....	651,719	.....	651,719	0.4
Globe Petroleum Co.	652,556	.....	.....	652,556	0.4
Huasteca Petroleum Co.	.....	33,283,189	.....	33,283,189	22.3
Imperio, Cia. de Gas y Combustible.	5,984,180	.....	.....	5,984,180	4.0
Internacional Cia. de Petroleo	2,882,022	3,351,796	.....	6,233,818	4.2
Inversiones Petroliferas Cia. Mex. de	.....	400,579	.....	400,579	0.3
India y Mexicana, Cia. de Petroleo	.....	69,656	.....	69,656	0.0
Ita Mex Oil Co.	360,725	.....	.....	360,725	0.2
J. F. White	160,307	.....	.....	160,307	0.1
J. L. Hudson	132,562	.....	.....	132,562	0.1
Kone Wills S. en C.	457,107	.....	.....	457,107	0.3
Maritima La Cia. de Petroleo	163,685	.....	.....	163,685	0.1
Meridional La. Cia. de Petroleo	79,770	.....	.....	79,770	0.1
Mexican Atlas Petroleum Co.	497,608	.....	.....	497,608	0.3
Mexican Crude Oil Co.	143,727	.....	.....	143,727	0.1
Mexico, Cia. Nacional de Petroleo	97,489	.....	.....	97,489	0.1
Mexican Gulf Oil Co.	2,342,962	5,527,419	.....	7,870,381	5.3
Mexicana de Petroleo, S. A.	2,628,535	.....	.....	2,628,535	1.8
Mexican Sinclair Pet. Corp.	.....	162,842	.....	162,842	0.1
Mexicana de Combustible, S. A.	135,505	68,310	.....	203,815	0.1
Nacional Oil Co.	91,733	.....	.....	91,733	0.1
New England Fuel Oil Co.	4,981,108	.....	.....	4,981,108	3.3
Norman Mex. Pet. Co.	256,651	.....	.....	256,651	0.2
Otontepec Cia. de Petroleo	.....	77,361	.....	77,361	0.0
Panuco Boston Oil Co.	713,575	.....	.....	713,575	0.5
Penn. Mex. Fuel Oil Co.	.....	901,030	.....	901,030	0.6
R. Thomas y Compania	300,310	.....	.....	300,310	0.2
R. B. Cochran	78,311	.....	.....	78,311	0.0
Richmex Petroleum Co.	1,654,496	.....	.....	1,654,496	1.1
Tal Vez. Compania Petrolera	428,682	.....	.....	428,682	0.3
Texas Co. of Mexico, S. A.	2,308,856	326,709	.....	2,635,604	1.8
Transcontinental de Petroleo	22,943,310	900,916	.....	23,844,226	16.0
Vincent and Batte	.....	1,508,792	.....	1,508,792	1.0
Williamson, D. A.	271,734	.....	.....	271,734	0.2
Other companies	353,624	154,413	.....	508,037	0.3
Total	87,689,476	61,647,579	3,780	149,340,835	100.0

TABLE NO. 10
***Destination of Exports of Petroleum From Mexico in 1923**
(Stated in Barrels)

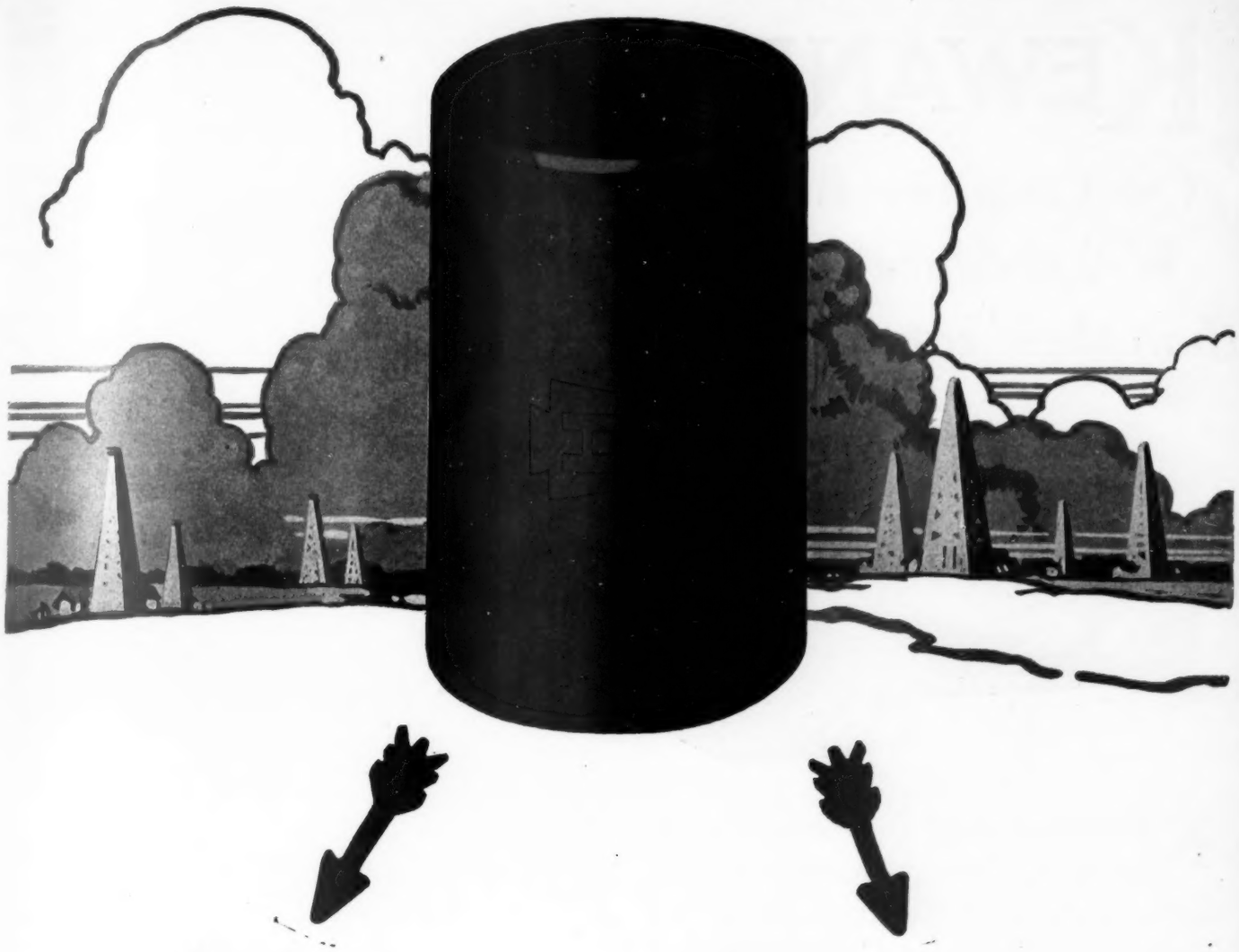
Country—	Crude— Heavy	Light	Total Crude	Fuel Oil	Refined Oil	Total	Pct.
Germany	.....	.....	.....	485,406	107,012	592,418	0.6
Argentina	.....	19,109	19,109	3,179,633	271,942	3,470,684	3.7
Australia	.....	.....	.....	.....	22,889	22,889	0.0
Brazil	.....	.....	.....	996,953	262,947	1,259,900	1.0
Belgium	.....	.....	.....	61,309	17,820	79,129	0.1
Canada	444,093	1,291,356	1,735,449	613,923	99,155	2,448,527	1.9
Colombia	.....	.....	.....	29,601	.....	29,601	0.0
Costa Rica	83,122	.....	82,122	.....	.....	83,122	0.1
Cuba	6,003,868	.....	6,003,868	753,976	1,025	6,758,869	5.3
Chile	1,195,377	282,553	1,477,930	198,707	47,150	1,723,787	1.3
Egypt	.....	.....	.....	419,788	.....	419,788	0.3
Spain	.....	.....	.....	241,719	.....	241,719	0.2
United States	52,967,398	12,409,648	65,377,046	25,227,322	5,850,058	96,454,426	75.2
France	.....	.....	.....	531,655	258,362	840,017	0.7
Guatemala	324,829	.....	324,829	.....	5,824	330,653	0.3
Holland	667,130	.....	667,130	632,025	.....	1,299,155	1.0
Honduras	262,494	.....	262,494	262,519	.....	525,013	0.4
England	421,002	.....	421,002	5,805,739	1,489,579	7,716,320	6.0
India	.....	.....	.....	.....	46,842	46,842	0.0
Italy	.....	1,686	1,686	758,316	.....	760,002	0.6
Jamaica	.....	.....	.....	43,382	.....	43,382	0.0
Japan	.....	.....	.....	.....	20,361	20,361	0.0
Nicaragua	57,182	.....	57,182	.....	.....	57,182	0.0
Panama	54,201	1,836	56,037	1,116,972	10,184	1,182,193	0.9
Portugal	.....	.....	.....	304,876	.....	304,876	0.2
Porto Rico	332,112	4,460	336,572	351,850	.....	688,422	0.5
Rumania	.....	.....	.....	65,963	.....	65,963	0.1
Santo Domingo	23,694	.....	23,694	10,687	.....	34,381	0.0
Turkey	.....	.....	.....	90,859	.....	90,859	0.1
Uruguay	.....	.....	.....	654,525	95,092	749,617	0.6
Total	62,836,502	14,010,648	76,847,150	42,887,705	8,606,242	128,341,097	100.0
North America	53,411,491	13,701,004	67,112,495	25,841,245	5,949,214	98,902,954	77.1
Antilles	6,359,674	4,460	6,364,134	1,159,895	1,025	7,525,054	5.9
Central America	781,828	1,836	783,664	1,379,492	16,008	2,179,164	1.7
South America	1,195,377	301,662	1,497,039	5,059,418	677,131	7,233,588	5.6
Europe	1,088,132	1,686	1,089,818	8,937,008	1,872,772	11,899,598	9.3
Asia	.....	.....	.....	90,859	67,202	158,061	0.1
Africa	.....	.....	.....	419,788	.....	419,788	0.3
Oceanea	.....	.....	.....	.....	22,890	22,890	0.0
Total	62,836,502	14,010,648	76,847,150	42,887,705	8,606,242	128,341,097	100.0

*Excludes bunker oil loadings.

TABLE NO. 9
***Exports of Crude Petroleum and Derivatives, 1923, by Companies**
(Stated in Barrels.)

Company—	Crude— Heavy	Light	Total Crude	Fuel Oil	Gas Oil	Gasoline— Crude	Refined	Kerosene— Crude	Refined	Lubs	Asphalt	Paraffin	Total	Pct.
Aguila El Cia. Mex. de Pet.	.....	2,283,201	2,283,201	10,774,040	28,585	.....	835,268	.....	568,320	198,934	807,718	151	13,213,019	9.7
Agwi, Cia. Petrolera	.....	15,278	15,278	195,185	.....	.....	.....	.....	.....	.....	.....	.....	2,388,615	1.8
Continental Mex.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	210,463	0.2
Corona La Cia. Mex. Holandesa	15,396,429	.....	15,396,429	5,836,453	41,294	.....	296,693	.....	2,669	.....	.....	.....	21,587,657	15.9
Cortes Oil Corp.	.....	240,857	240,857	7,378	.....	.....	.....	2,692	.....	.....	.....	.....	250,927	0.2
Chadick y Compania	1,195,402	.....	1,195,402	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,195,402	0.9
East Coast Oil Co.	8,401,509	.....	8,401,509	.....	.....	.....	.....	.....	.....	.....	.....	.....	8,401,509	6.2
Freeport & Mex. Fuel Oil Corp.	10,504,306	.....	10,504,306	.....	.....	.....	.....	.....	.....	.....	.....	.....	10,504,306	7.7
Huasteca Petroleum Co.	61,957	149,513	211,470	26,433,297	173,786	4,171,295	1,081,867	80,324	.....	.....	.....	.....	32,152,039	23.7
Imperio, Cia. de Gas y Combust.	1,959,241	.....	1,959,241	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,959,241	1.4
Interocean Oil	633,950	.....	633,950	.....	.....	.....	.....	.....	.....	.....	.....	.....	633,950	0.5
Internacional de Petroleo	621,030	2,748,183	3,369,213	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,369,213	2.5
Metropolitana de Oleoductos	.....	143,406	143,406	.....	.....	.....	.....	.....	.....	.....	.....	.....	143,406	0.1
Mexican Atlas Pet. Corp.	27,902	.....	27,902	.....	.....	.....	.....	.....	.....	.....	.....	.....	27,902	0.0
Mexican Crude Oil Co.	17,058	.....	17,058	.....	.....	.....	.....	.....	.....	.....	.....	.....	17,058	0.0
Mexican Gulf Oil Co.	2,001,824	5,851,096	7,852,920	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,852,920	5.8
National Pet. Corp.	337,805	.....	337,805	.....	.....	.....	.....	.....	.....	.....	.....	.....	337,805	0.3
New England Fuel Oil Corp.	3,597,786	.....	3,597,786	1,680	.....	.....	.....	.....	.....	.....	.....	.....	3,599,466	2.7
Panuco Boston Oil Co.	458,988	.....	458,988	.....	.....	.....	.....	.....	.....	.....	.....	.....	458,988	0.3
Pierce Oil Corp.	122,046	.....	122,046	771,796	252	.....	.....	67,762	.....	.....	.....	.....	961,355	0.7
Texas Co. of Mexico	3,445,511	1,650,219	5,095,730	3,479,345	.....	478,537	.....	.....	.....	25	.....	.....	9,053,612	12.4
Transcontinental de Petroleo	14,716,360	1,022,968	15,739,328	1,013,093	.....	.....	.....	.....	.....	.....	.....	.....	16,752,446	0.4
U. S. Mex. Oil Corp.	503,735	.....	503,735	.....	.....	.....	.....	.....	.....	.....	.....	.....	503,735	100.0
Total	64,002,838	14,104,721	78,107,559	48,617,681	243,920	4,649,832	2,213,828	150,778	585,108	198,959	807,718	151	135,575,534	

*Includes bunker oil loadings.



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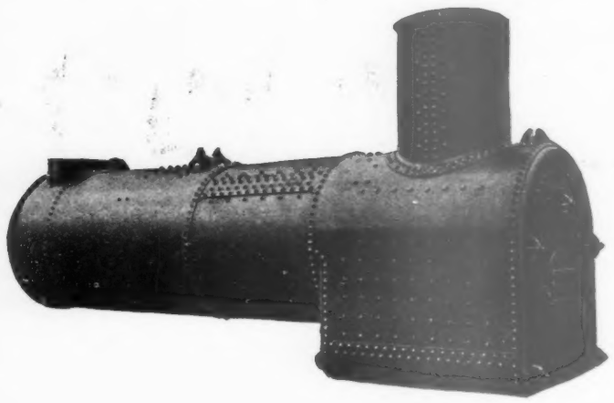
Will produce MORE than their rated capacity



KEWANEE Boilers are conservatively rated. That means they will not only produce all the heat shown by their rated capacity—BUT MORE. With a Kewanee on the job you never need worry about an overload—they'll handle a good sized overload, easily.

And the capacious dome assures a reserve supply for sudden demands.

Better not take any chances—buy a Kewanee.

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KEWANEE, ILLINOIS

Makers of Steel Boilers, Steel Tanks, Water Heating Garbage Burners, Tabasco Water Heaters

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District Sales Offices:

Fort Worth, Texas Ardmore, Okla. Denver, Colo.

Casper, Wyoming Great Falls, Mont.

Branches in All Prominent Oil Fields

585,108 bbls.; lubricating oils, 198,959 bbls.; asphalt, 807,718 bbls., and paraffin, 151 lbs.; total 135,575,534 bbls. Exports by companies and products are shown in Table 9.

Of total exports, excluding bunker oil loadings, in 1923 were 128,341,097 bbls., of which 96,454,426 bbls., or 75.2 per cent were destined to the United States. Of the shipments to the United States, 52,967,398 bbls. were heavy oil and 12,409,648 bbls. light oil, total crude 65,377,046; 25,227,322 bbls. of fuel oil and 5,850,058 bbls. of other refined products. Destination of exports from Mexico in 1923 is shown in Table 10.

Mexico levies two petroleum taxes. One is referred to as the export tax and the other the production tax. The total of the two taxes in 1923 was approximately $30,267,000 United States currency. Export and production taxes are shown in Table 11.

TABLE NO. 11
Taxes on Petroleum and Derivatives, 1923
(Stated in Mexican Gold)

	Export Tax	Production Tax
Crude oil:		
Heavy	$ 6,308,705.84	$14,737,948.73
Light	2,242,404.00	6,196,290.18
Total	$ 8,551,109.84	$20,934,238.91
Fuel oil	$ 6,183,438.80	$17,348,649.40
Gas oil	72,128.94	196,083.90
Gasoline:		
Crudes	2,779,549.92	2,781,897.51
Refined	661,684.80	626,347.26
Total	$ 3,441,234.72	$ 3,408,244.81
Kerosene:		
Crude	$ 28,765.20	$ 50,506.31
Refined	55,813.20	102,145.11
Total	$ 84,578.40	$ 153,651.94
Lubricants	$ 35,426.72	$ 79,077.50
Asphalt	14,930.08	33,932.06
Paraffin	19.36	44.00
Grand total	$18,382,916.86	$42,152,722.43
U. S. Currency, (approx.)	$ 9,191,000.00	$21,076,000.00

GAS FOR COTTON GINS

HOUSTON, Tex., August 2.—The Seagraves interests, of Galveston, are laying a 10-inch gas line from the Dunne gas well to Robstown, near Corpus Christi. The well is 10 miles east of the town. Fuel will be furnished cotton gins, a cotton seed oil mill and domestic consumers. The cotton seed oil mill has installed a 300 horsepower gas engine, the first of its kind in the southwest.

PENNSYLVANIA'S OIL PRODUCTIOON 2.3 PER CENT LESS DURING LAST YEAR

HARRISBURG, Pa., Aug. 2.—Pennsylvania's 19 crude oil counties in 1923 produced a total of 7,068,092 barrels of oil, or 2.3 per cent less than in 1922, according to figures made public by Secretary of Internal Affairs James F. Woodward, following the completion of a survey of the fields made by the Bureau of Statistics and Information of the Pennsylvania Department of Internal Affairs. Secretary Woodward said that only Crawford, McKean, Mercer and Warren Counties showed increased production, all of the others being under the 1922 output. McKean County was again the largest producer, with a total of 2,490,696 bbls. last year. Venango County was second with 1,304,206 bbls.

The State's production in 1923 came from a total of 71,211 wells, or 4.4 per cent less in number than in 1922. Each of these wells produced an average of 99.3 bbls. apiece or 2.3 per cent more than in the preceding year. In 1922 the average production per well was 1.2 per cent less than in 1921.

Records of the Department of Internal Affairs show that during last year 2,963 wells were brought in compared with 2,988 in 1922. In 1923 there were 6,271 wells abandoned compared with 2,201 in 1922.

In the table following it will be noted that Greene County attained the highest production per well in the State. The table shows the county production, number of producing wells, average production, etc.

	Production Bbls.	Total Producing Wells	Av. Annual Prod. per Well, Bbls.	New Wells Brought In	Old Wells Abd.
Allegheny	561,398	1,958	286.7	32	44
Armstrong	24,266	203	119.5	7	1
Beaver	100,140	878	124.3	23	37
Butler	781,402	6,052	129.1	278	266
Clarion	210,914	2,514	83.9	97	57
Crawford	59,024	1,081	54.6	93	79
Elk	101,642	1,174	86.6	10	0
Forest	82,707	1,746	50.0	178	84
Greene	274,229	730	375.6	20	42
Jefferson	9,237	163	56.7	0	0
Lawrence	28,654	554	51.7	169	0
McKean	2,490,696	18,590	134.0	1,174	3,466
Mercer	13,643	364	37.5	40	0
Potter	12,135	270	44.9	0	0
Tioga	7,712	80	95.4	0	0
Venango	1,304,206	25,900	50.1	534	1,574
Warren	522,107	7,015	71.8	291	579
Washington	474,765	1,938	245.0	17	51
Westmoreland	215	1	215.0	0	0

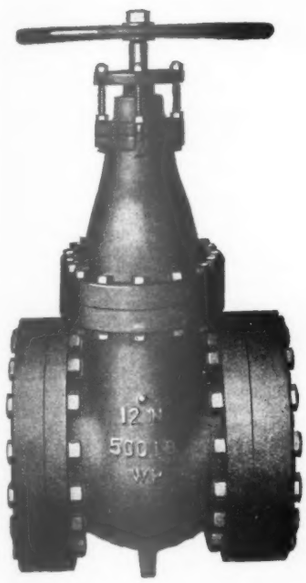
AVERAGE DAILY PRODUCTION IN JUNE OF THE 20 LEADING POOLS IN THE U. S.

	January, Bbls.	February, Bbls.	March, Bbls.	April, Bbls.	May, Bbls.	June, Bbls.
California—						
Midway-Sunset	84,612	95,179	97,313	99,137	104,308	105,240
Long Beach	218,646	219,013	196,922	175,844	166,854	159,512
Santa Fe Springs	138,006	105,742	86,540	72,713	69,351	63,942
Huntington Beach	64,088	59,835	55,906	51,362	48,584	46,073
Torrance	31,363	27,597	37,683	54,801	57,538	57,228
Elk Hills	22,406	36,942	38,358	36,697	36,857	38,503
*Coyote	4,177	3,795	4,065	15,325	18,814	18,820
Kern River	19,031	19,046	18,433	19,266	18,478	18,693
Coalinga	17,605	21,748	30,360	37,175	36,030	32,868
Montebello	17,065	18,542	16,849	16,624	16,745	16,717
Wyoming—						
Salt Creek	118,493	110,825	99,500	95,595	92,780	91,009
Oklahoma—						
Burbank	80,887	102,216	99,378	106,864	87,024	91,619
Bristow	42,605	47,119	47,534	45,666	43,411	44,187
Tonkawa	39,723	38,406	35,720	35,291	35,211	36,674
Cushing	23,369	24,086	24,115	24,410	24,716	23,981
Hewitt	20,008	20,411	19,825	19,769	20,727	19,879
Healdton	15,956	16,426	16,166	16,768	16,710	16,575
*Graham-Fox	14,514	15,626	17,462	20,062	18,905	19,866
*Stroud	2,125	3,919	4,463	5,944	16,456	22,716
*Cromwell	338	643	4,660	6,540	16,570	25,719
Texas—						
Powell	94,800	106,360	124,847	117,167	103,106	93,401
Mexia	34,708	34,737	33,809	32,955	30,612	28,718
Burkburnett	21,238	20,796	26,676	20,499	20,019	19,634
Holliday	20,368	24,410	27,178	33,616	33,851	31,658
Electra	19,908	19,088	19,335	20,123	20,711	21,079
Hull	18,596	28,512	24,984	22,084	18,385	18,998
*Luling	10,000	15,100	20,750	28,850	38,300	46,200
Arkansas—						
Smackover	101,361	97,650	104,814	113,265	140,127	142,242
Louisiana—						
Haynesville	21,882	20,640	19,806	16,715	18,481	18,363
Total	1,317,878	1,354,300	1,347,441	1,360,117	1,369,661	1,370,929

*Added to "leading fields" since January.

High Pressure Specialists

"The Best Designed Valve on the Market"



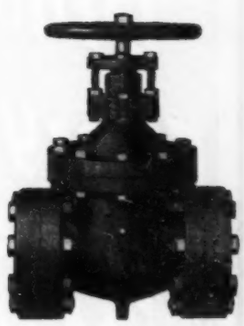
The Westcott Valve Company was organized to manufacture for the Oil and Gas trade a complete line of high grade gate valves for all pressures, and has made a special and exhaustive study of high-pressure valve construction.

As a result, we have brought out many improvements and refinements in design and materials which we believe support our claim that the WESTCOTT is "the best designed valve on the market."

Bodies and bonnets are designed to give a maximum of strength where strength is needed, such as in the "pipe" necks back of flanges and hexagons, in the hexagon around the pipe thread, on the long sides of the oval bodies, etc.

The clear waterway with no lugs to obstruct the passage, the "leg" on the bottom to enable the valve to stand up in transit or wareroom, the four bolt glands, are among the many improvements which make this a "better" valve.

A double seating repacking collar allows our valves to be repacked while under pressure.



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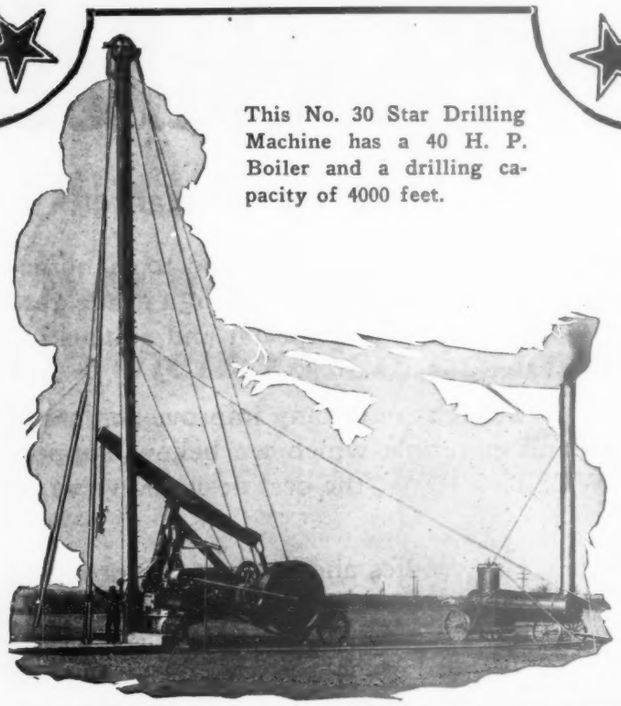

This No. 30 Star Drilling Machine has a 40 H. P. Boiler and a drilling capacity of 4000 feet.

Quickly Moved and Set Up Star Portable Drilling Machines Everywhere Save Time and Make Money for Their Owners

THE STAR DRILLING MACHINE CO.
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National Supply Co. Announces Important Executive Changes

On July 15, the National Supply companies announced the following changes in the executive personnel: James H. Barr, president, assumes the chairmanship of the board of directors; John M. Wilson, vice president, succeeds Mr. Barr as president, and John A. Geismar,

James H. Barr

assistant general manager, becomes vice president and general manager.

Mr. Barr assumes the chairmanship of the board after a service as president for the past seven years. His service with the National Supply companies, however, dates back 44 years to September 1880. Beginning in the traditional way, on the lower rungs of the ladder, Mr. Barr, through close application, soon fitted himself to take a position as traveling representative for the company. The valuable experience gained in this connection qualified him for the position of purchasing agent and his keen judgment and quick grasp of market conditions earned for him an enviable reputation in that capacity. When the Buckeye Supply Co. merged with the National Supply Co., Mr. Barr became the latter's first secretary. During the years that followed, he successfully filled the positions of second vice president, first vice president and in 1917 was selected as president.

John M. Wilson

His ability has long been recognized among the oil and gas producing fraternity, and, a fitting tribute to this ability was his election as chairman of the advisory committee on oil well supplies of the fuel administration during the World War.

Being a leader of recognized high standing in his line of business, it is not too much to say that much of the success of the National Supply companies has been due to the business acumen and executive ability of Mr. Barr.

John M. Wilson, who succeeds Mr. Barr as president, is the son of Henry M. Wilson, president of the National Supply Co. from 1901 to 1905. Mr. Wilson is a graduate of Harvard University and Harvard Law School; and, after graduating, practiced law for several years. Leaving the law, Mr. Wilson became actively engaged in the banking business, which he later left to enter the National organization at Beaumont, Tex.

The several years of experience in the Texas oil fields made an excellent foundation for advancement and in 1908, Mr. Wilson was called to Pittsburgh, Pa., as manager of the tubular department. Soon after the election of Mr. Barr to the presidency, Mr. Wilson was selected for the position of assistant to the president, and served in this capacity until 1921, when he became an executive vice president.

The broad administrative experience and intimate field knowledge which Mr. Wilson possesses well equips him to fulfill the demands of his new offices as president of the National Supply companies.

Mr. John A. Geismar, vice president and general manager, entered the factory and railway supply department of the National's organization at Toledo, Ohio,

John A. Geismar

in 1901. Beginning with the humble position of keeper of stock records at Toledo store, Mr. Geismar prepared himself for larger opportunities by obtaining a general knowledge of the line with which he was associated. Subsequently he became traveling representative for his company in the Michigan territory.

The experience gained through his contact with men and institutions ably fitted him, to assume the managership of the machinery and factory supplies department in 1906. This position he held until his appointment as director of merchandising in 1919, which was his first connection in an executive way with the oil well supply activities of the National's business.

Since that time, Mr. Geismar has successfully held the positions of manager of sales, and assistant general manager, and now enters upon the duties of vice president and general manager, after a wide and varied experience.

Mr. Geismar being possessed of a genial personality has acquired a wide acquaintance throughout the oil fields of this country; and, assumes his new duties with the best wishes of his large circle of friends, both within and without the National organization.

Cementing of Cable-Tool Casings Is No More Than Sound Business Practice

The water demons are ever-ready to break in.

One of the gravest dangers that your wells are subject to is to have water come from above, slow up production and eventually kill the well years before its time.

An ordinary water string is *not* an adequate protection, as the records of hundreds of prematurely abandoned wells could testify.

The only real protection against upper water is a permanent, water-tight jacket of cement.

Cementing prevents collapse of casing because it protects casing in region of greatest external pressure.

It prevents *corrosion* of casing by protecting it against highly mineralized fluids.

It prevents migration of fluids by confining the water and oil to their respective formations.

Oil Well Cementing is absolute insurance against water and other serious hazards.

It gives a permanent seat exactly where seating is desired; it protects the well in shooting without the necessity of pulling up casing 3 to 400 feet. It gives the well the kind of insurance such an investment deserves.

When oil well cementing gives such important advantages as these, can you afford not to cement *your* wells?

But be sure when you do cement that the job is in competent hands. With 4,000 successfully cemented wells to our credit—with exclusive control in the Mid-Continent of the Perkins process—with our own exclusive patented measuring tape—and with mixers that mix 100 sacks of cement every 6 minutes—your work is in safe hands when entrusted to us. Let us give you full details today!

ERLE P. HALLIBURTON

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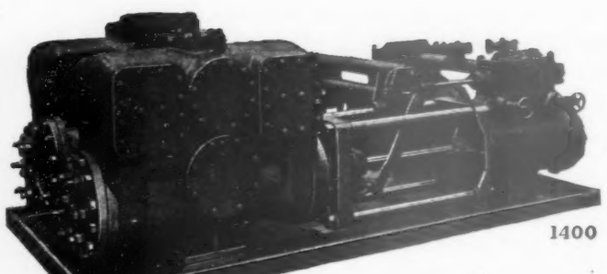
Of Scientific Oil Well Cementing

101

IT must take a great deal of self-confidence to justify the selection of any but a TRANSIT pump for many refinery services.

It is true that most any pump will pump oil. But it is also true that few pumps will fit refinery service as well as TRANSIT pumps, because like refineries, they are built to handle oil and its products.

For example, consider our Block Valve Type Pumps, illustrated below. We know of several successful refinery superintendents who see to it that all hot tar, asphalt, residuum, and other heavy semi-liquids are handled through TRANSIT Block Valve Type Pumps. They are convinced that these pumps are built for just such work.



12x9x18" Block Valve Pump with base plate drip pan, for 300 lbs. working pressure.

If you have to do with the selection of refining pumps, we will do everything we can to help you get the best pump for any condition.

NATIONAL TRANSIT
Pump & Machine Company
Oil City, Pa.

District Offices:

New York Philadelphia Pittsburgh Cleveland Tulsa Houston Denver

CENTRAL WEST

(Continued from Page 58)

is an odd proposition, and the fact that every well is a test makes it a lottery. There are at least three pools in the county and none covers a very wide area, but usually when a well is found it starts at a nice production. The Adams Corner Oil Co.'s No. 4 on the J. T. Smith farm, Section 22, is credited with a flush of 130 bbls. Timberlake and others' No. 1 George Lovelette, Section 15, and Young and others' No. 1 J. T. Smith farm, Section 15, were dusters, and it must be remembered that it was in the same section as the good Adams Corners well and on a portion of the same farm, indicating that the territory is spotted at its best. The Coons Creek Oil Co.'s No. 1 A. Biehl farm, Section 15, is reported at 80 bbls.

In Wabash Township, same county, the Arkansas Fuel Oil Co. is drilling No. 9 Della Wright, Section 8, and No. 1 John Payne, Section 8. The Adams Corner Oil Co. is drilling No. 5 J. T. Smith, Section 15; Timberlake and others are drilling No. 1 J. T. Smith farm, same section. Henley and others are drilling No. 1 Price heirs' farm, Section 22, and have a rig in for a test on the John Leek farm, same section; Johnson and others are drilling No. 1 William Cousins farm, Section 16; Whiteside and others are drilling a test on the H. Armstrong farm, Section 24, and Seidner Smith are drilling No. 2 Holson-Dorney farm, Section 18. In Friendsville Township, same County, the Arkansas Fuel Oil Co. is drilling No. 1 T. J. Newson, Section 18, and No. 1 B. T. Price farm, Section 19.

In Martin Township, Crawford County, Karnes & Schrecongast's No. 5 S. Lamb farm, Section 2, was a dry hole, but No. 6 is drilling. In Honey Creek Township, McDowell & Galey are drilling No. 10 J. W. Rich, Section 4. In Montgomery Township, the W. C. McBride, Inc., is drilling No. 1 C. A. Dickinson farm, Section 14. The Kewanee Oil & Gas Co. is drilling No. 24 J. H. Wright farm, Section 26.

Clark County

In the Stray sand field of Martinsville Township, Clark County, the Trenton Rock Oil & Gas Co. is drilling No. 10 John S. Carper, Section 30, and has wells starting for No. 6 C. W. McClelland, and No. 2 William Howard, both in Section 30. The Ohio Oil Co. is drilling No. 13 S. M. Bosman, Section 30. Titus Oil Co. is drilling No. 1 Mary J. McCullough, Section 30, and W. C. McBride, Inc. is drilling No. 2 Nettie Baker, Section 30. In Westfield Township, same county, D. W. Watson and others are drilling No. 2 R. C. Wilhoit, Section 19. In Johnson Township, the Ohio Oil Co. is making a deep test of its well on the Z. E. Brant farm, Section 26.

L. C. Hood and others are drilling a wildcat well on the J. H. Sallee farm, Section 19, Kansas Township, Edgar County, and close to the town of Kansas, on the railroad running north and south from Sidell to Olney.

In Hutton Township, Coles County, Colegrove, Hoey and others drilled a 1-bbl. well in No. 16, on the J. Foreman, Section 7, at a depth of 533 feet.

The Ohio Oil Co.'s No. 11, on the Antone Gaertner farm, Section 2, Waterloo Township, Monroe County, is reported at 25 bbls. from the shallow sands.

In Centralia Township, Marion County, the Mt. Carmel Oil Syndicate abandoned No. 1 J. H. Rapp, Section 19.

Central Ohio

A fair week's development work was accomplished in the Central Ohio Field, there being 12 completions, with one oil well, with a flush of 80 bbls., 4 dry holes and 7 gas wells. There were 9 drilling wells started during the week and 11 new locations. This indicates that the gas companies are starting their early summer's work, in a still hunt for a further supply of natural gas, as the gas people are doing the bulk of the work in the field.

The only oil completion for the week is the Ohio Oil Co.'s No. 3 on the Peter Skelley farm, Section 21, Wooster Township, Wayne County, which showed a production of 80 bbls. from the deep Clinton sand. In Wayne Township, same county, the Logan Gas Co.'s No. 1 M. V. Caskey, Section 4, on an 80-acre lease, developed into a dry hole. No. 2 location has been staked out on the same farm. In Cannan Township, same county, Arthur & Mills drilled in what looks good for 600,000 feet of gas in No. 2 A. W. Latimer, Section 29, and Daugherty Brothers' second well on F. A. & M. Snell, Section 28, produced around 162,000 feet. Daugherty Brothers are drilling No. 1 S. Whonsettler 41-acres, Section 16. The Logan Gas Co. started the drill at No. 3 T. A. Armstrong, Section 32, and made locations for No. 1 on the E. G. Klinker 40 acres, Section 15, and No. 2 on the J. D. Scholl 80 acres, Section 22.

In Benton Township, Hocking County, the Logan Gas Co.'s No. 5 J. L. Mank, Section 13, is a light gas well.

Holmes County

In Monroe Township, Holmes County, the Central Ohio Gas Co. drilled a very light gas well in No. 1 James Allison farm, Section 2. This company made a location on the Frank P. Anderson 170 acres, Section 5. The Klise-Eckstein-McCann Co. struck an exceptionally fine gas well at its test on the Charles Barnes, Section 7, and is starting No. 2, same farm. The East Ohio Gas Co. has started the drill at its No. 1 Melissa Gambler farm, Section 30, Hardy Township.

In Newcastle Township, Coshocton County, the Logan Gas Co. started drilling No. 1 Mose Dallierer farm, Section 23. In Washington Township, Jackson County, the Ohio Fuel Gas Co. started drilling No. 1 on the Gates-Chenoweth 151 acres, Section 24, and in Franklin Township, the Ohio Fuel Supply Co. is drilling No. 1 on the T. J. Deering 38 acres, Section 26.

In Athens County, Carthage Township, the Logan Gas Co. is drilling No. 55 on the Arthur Cole 83 acres, Section 4, and made a location for No. 1 on the Minnie Allen, Section 12. In Troy Township, same county, McBride and others' No. 1 Sidney H. Johnson, Section 35, is a light gas well, while the Logan Gas Co. got a dry hole on the S. W. Wildman, Section 24.

In Strongville Township, Cuyahoga County, just outside of Cleveland, the East Ohio Gas Co.'s No. 1 on the J. T. Price farm, Lot 97, is a small gas well. The Central Ohio Gas Co. drilled a dry hole in a test on the southwest corner of the R. Todd, Lot 83, at a depth of 3-132 feet.

Eastern Kentucky

Only three completions were reported from the Ida May district, of Lee County, and one from the South Weir sand of Johnson-Magoffin Counties. Quietude prevails over the eastern Kentucky regions, due to the low price of crude.

In the Ida May Field of Lee County, Hupp, Duff and others drilled in No. 2 Adaline Porter farm, and Nos. 11 and 12 Dave Mays heirs' farm, with 15, 20, and 20 bbls., respectively.

In the South Weir sand field of Johnson-Magoffin Counties, the Atlantic Oil Production Co.'s No. 1 Frank Conley 66 acres, is estimated at 5 bbls.

The Cumberland Pipe Line Co.'s runs through its gathering and trunk lines of eastern Kentucky for the week closing July 19, totaled 83,138.41 bbls. for a daily average of 13,856.40 bbls. Of this amount handled, 59,748.33 bbls. comes from what is known as the Big Sandy district, and the balance from the Lee, Posell, Estill, Wolfe and other counties westward from the Big Sandy country. The three pump stations of this company in the Blaine district, in Lawrence and Johnson Counties, for the week handled a total of 23,352.10 bbls. This is from the district where the Union Gas & Oil Co. has completed over 500 wells.

EASTERN FIELDS

(Continued from Page 60)

farm. In Salt Creek district, Braxton County, the Hazel-Atlas Gas Co.'s test on the C. W. Hamrick farm is dry in the Gordon sand. It has been abandoned. The Hope Natural Gas Co.'s test on the Parsons-Martin farm, in Sheridan dis-

Announcing:

THE NEW READING 400 POUND W.S.P. CAST STEEL VALVES and FITTINGS

The new standards for cast steel flanged valves and fittings include classes for 250, 400, 600, 900 and 1350 working steam pressure.

Existing lines of Reading cast steel valves are to the dimensions of the 250 W.S.P. class. We announce as new lines Reading 400 W.S.P. cast steel flanged gate and globe valves and cast steel flanged fittings of all the classes.

READING STEEL CASTING COMPANY
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Reading Valve and Fittings Division
An Associate Company of the American Chain Company, Incorporated
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Stocked by Norvell-Wilder Hardware Company, Beaumont, Houston, Mildred and Shreveport
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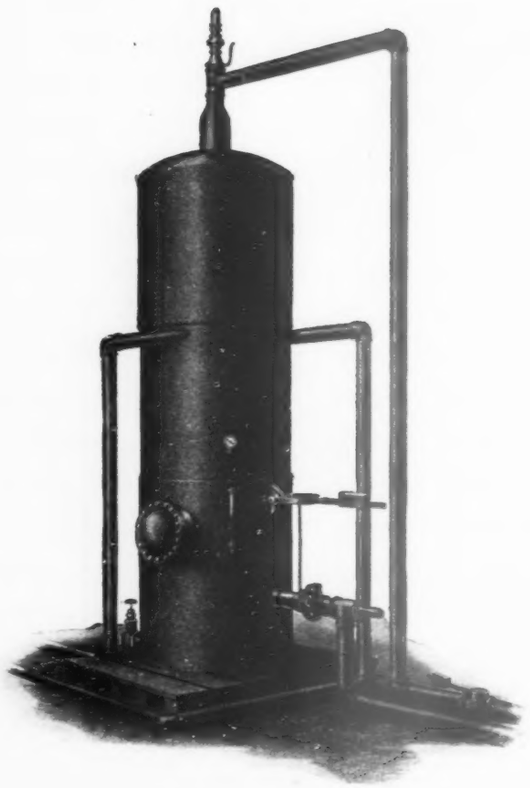
Trumble Gas Traps are Found Wherever Oil and Gas Is Found



For many years Trumble Oil and Gas Separators have been used all over the world and a saving of both oil and gas has been effected by their use. A saving of oil is effected by holding the lighter constituents in the oil while the separation is taking place, under pressure. The gas when separated from the oil is confined to pipe lines where it may be carried to any place where it may be desired.

Oil and gas conservation is an important item in the operating fields today and may be the difference between profit and loss in operating a small field.

Trumble Gas Trap Company

804 Higgins Building
LOS ANGELES, CAL.

William C. Rae
SALES MANAGER

Eastern Representative:
C. F. CAMP
14 East Seventh Street (P. O. Box 280)
TULSA, OKLAHOMA

trict, Calhoun County is a gasser in the Big Injun sand. In the same district, L. B. Gorrell's test on the S. K. Wolverton farm is a gasser in the Berea grit. In Center district, the Hope Natural Gas Co. completed a Big Injun sand gasser on the M. Hardman farm.

Ritchie County

In Clay district, Ritchie County, the Pittsburgh & West Virginia Gas Co. has a light gasser in the Big Injun sand at a test on the W. R. McCullough farm. In Grant district, McGinnis & Co.'s second test on the J. B. Markey farm is a light pumper in the salt sand. In Murphy district, Captain Smith & Co. got a gasser in the Maxon sand at a test on the William McFadden farm. In Murphy district, V. B. Darby & Co. completed a Big Injun sand gasser on the H. J. Barrett farm. In New Milton district, Doddridge County, the Philadelphia Oil Co.'s No. 3 on the T. J. Smith farm is holding up at 60 bbls. a day. The Carter Oil Co. gave its No. 2 on the I. M. Smith farm a shot and increased its production to 85 bbls. the first 24 hours.

More Gassers for Lincoln County

On Mud River, Carroll district, Lincoln County, Meabon & Huffman completed and shot in the Berea grit a test on the Charles Gillenwaten farm. It is a fair gasser. On Trace Fork, the Columbia Gas & Electric Co. has a rig completed for a test on the J. F. Grass farm. On Charleys Creek, Grant district, Cabell County, the Aetna Oil & Gas Co. has started to drill a test on the S. A. Wallace farm. On Saunders Creek, the Ohio Fuel Oil Co. has started to drill on the George Alexander farm.

Drilling and Starting Tests

In Union district, Ritchie County, the Carnegie Natural Gas Co. is due in the Big Injun sand at a test on the Walter Somerville farm. In the same district, the Pittsburgh & West Virginia Gas Co. has started to drill on the Lewis Garrison farm. In Clay district, the same company has started to drill on the Okey E. Nutter farm. In Grant district, Lucas & Mehaney are drilling on the E. J. Fifer farm. In Murphy district, the Hope Natural Gas Co. is building a rig on the Sidney Jordon farm. In Central district, Doddridge County, the Carter Oil Co. has started to drill on the E. P. Dotson farm and has a rig up for a second test on the same farm. In McClelland district, the same company has skidded the rig on the R. J. Ash farm and will start a new hole.

In Collins Settlement district, Lewis County, E. C. McCall & Co. are due in the Gordon sand on the George Hall farm. In Courthouse district, Harrison County, the Federal Oil & Gas Co. is rigging up on the Bennett-Shock farm in Center district, Gilmer County. In Lee district, Calhoun County, the same company has the road completed to a location on the Albert Bell farm. In Center district, W. H. Bickel has lost a string of tools in his test on the Alphens Holbert farm.

Braxton County Tests

In Otter district, Braxton County, the West Virginia Central Gas Co. is drilling on the E. J. McClain and George C. Gerwig farms. Smith & McCullough started to drill a second test on the Perry Riggs farm, in Lafayette district, Pleasants County. In Union district, L. C. White & Co. are rigging up on the E. L. Newland farm. In Union district, Harrison County, the Northwestern Gas Co. started to drill on the Ira Stout farm. In Ten-Mile district, C. T. Arnett started to drill on the Ferdinand Rodgers farm. In Curry district, Putnam County, the St. Albins Oil & Gas Co. is drilling on the G. C. Sutliff farm. In Union district, Lincoln County, the Carter Oil Co. has a rig up on the Mary J. Tully the Hope Natural Gas Co. is rigging up farm. In Greene district, Wetzel County, on the Isaac Smith farm and a rig up on the John Ingram farm. In Center district, the Myers Gas Co. started to drill on the Allen heirs' farm.

Southwest Pennsylvania

The southwest Pennsylvania fields completed a few wells. In Gilmore Township, Greene County, the Dunkard Valley Oil & Gas Co.'s test on the John Carpenter farm is a gasser in the Bayard sand at a total depth of 3,158 feet. In Moon Township, Allegheny County, Purdy Brothers have a fair gasser at a test on the William Ramsey farm. In Marshall Township, Pinkerton & Co.'s test on the Kruse far mis a duster. In the same township, the Scott Oil & Gas Co.'s test on the John Holmes farm is a 5-bbl. pumper.

RAINBOW BEND SUITS FILED IN U. S. COURT

PONCA CITY, Okla., August 2.—With the opening of additional oil areas in the southern Kansas territory by the Marland Oil Co. of Ponca City and others, another important river bed case is looming on the horizon, and millions of dollars in potential oil leases are involved in the suit filed in the United States District Court of Kansas by four landowners in the Rainbow Bend oil pool, 9 miles southwest of Winfield, in which they law claim to the title of the Arkansas River bed and all accretions of the stream to which the State has hitherto claimed ownership.

Governor Jonathan M. Davis and the executive council of the State are defendants. The four landowners who brought the suit are Ike E. Nelson, W. E. Holman, Silas Thurlow and A. P. Douthitt.

Under the Kansas statute, the State owns all sand, ravel, oil, gas and minerals lying beneath the river beds and accretions of all navigable streams. The State Supreme Court has ruled that the Arkansas River is a navigable stream but the Supreme Court of the United States ruled two years ago that the Arkansas River is not now, and never has been a navigable stream above Fort Gibson, Okla.

The plaintiffs claim that if the river is not navigable at Fort Gibson, is is not navigable above it. The case is being tried in Federal Court to see which decision will obtain.

Nelson, Holman, Thurlow and Douthitt claim their title to the lands in question under an old treaty with the Osage Indians, signed in 1868. Under this treaty the Indians ceded their lands to the United States, to be sold by the Government for their benefit. The Government was to act merely as trustee in the case and therefore purchasers of the property held their title directly from the Indians, which, their attorneys claim, places the matter outside of the jurisdiction of the State.

The four plaintiffs together lay claim to approximately 6 miles of the 9 miles in the Rainbow Bend. Some of the best oil wells in Kansas are gushing oil within a mile of this property, and every inch of ground for miles around has been leased at fabulous prices.

Despite this rush for leases, none of the river bed or its accretions have been leased, because of the doubt of the validity for the title. Some of the largest oil companies will await with interest the outcome of the present suit.

If the State succeeds in retaining title to the property, it will mean hundreds of thousands of dollars a year added to State revenues, oil experts estimate, as the State would be in a position to drill for oil itself or lease the land at handsome bonuses.

The Rainbow Bend Field was opened last November when oil was struck at 3,200 feet on the L. F. Johnson ranch. Subsequent development leads oil men to believe that the field will spread out over a wide area and perhaps may prove to be one of the largest oil producing districts in Kansas. For the most part the lleaes are held by major concerns with millions behind them. Some of the most prolific oil wells in Oklahoma have been drilled in the bed of the Arkansas River, and oil men here believe the river bed will also produce oil in Cowley, Sumner and Sedgwick counties.

VISITING MID-CONTINENT

H. F. Mattern, of Reading, Pa., sales manager for the Reading Iron Co., has been visiting the Mid-Continent region in company with R. J. Titley, of Tulsa, district sales manager.

Montgomery Spring Casing Hook

Absolute Safety!

TABLE OF NOMINAL SIZES AND CAPACITIES OF MONTGOMERY HOOKS:		
Size	Weight	Capacity
-½"	350 lbs.	29,450
¾"	500 lbs.	42,400
1½"	570 lbs.	57,726
1"	1,000 lbs.	75,396
1½"	1,100 lbs.	95,500
5"	1,750 lbs.	117,810
5½"	1,850 lbs.	142,548
6"	2,050 lbs.	169,644
6½"	2,100 lbs.	199,098
7"	2,400 lbs.	230,910
7½"	2,500 lbs.	265,074
9"	2,800 lbs.	301,590

Your Drillers—
Don't they deserve this Protection?

Three drillers were KILLED last year in Texas and Oklahoma alone, because their employers failed to protect them with a casing hook that was SAFE in fact as well as in name.

Dozens were injured from the same cause—some of them so seriously that they will carry the marks to their dying day—all because a hook was provided that was not the SAFEST that engineering skill could produce.

Because we know that drilling is hazardous at best, and because we know that every operator is anxious to give his men the greatest possible amount of protection, we determined to produce, as a TIFOCO product, a SUPER-HOOK—a hook that was SAFE as well as efficient.

We decided to MACHINE all parts after forging, in order to insure load suspension at theoretical center line, where the greatest load can be carried.

We decided on an oiling system that has proved a wonder—giving ample lubrication with practically no attention.

We decided to incorporate in one design (1) a double-swiveling spring hook; (2) a non-swiveling spring hook and (3) a non-rotating rigid hook.

We decided on an unfailing safety latch as an integral part of the hook, not an attachment.

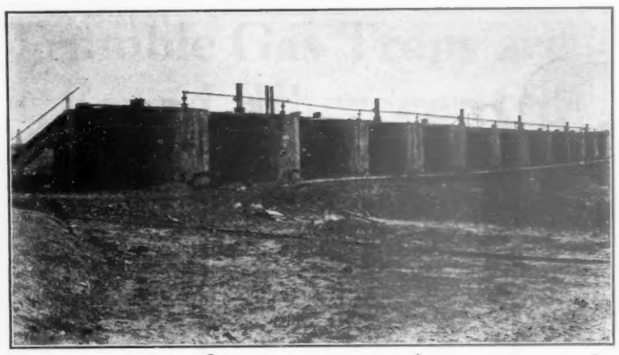
We decided to make the factor of safety 10 TO 1 instead of 4 to 1 as in other hooks. A big difference—but then a human life can never be replaced.

Practice has more than proved the wisdom of special care in design and manufacture. Operator after operator is finding that the saving in casing threads alone more than pays for the Montgomery Hook. Most important of all, however, the operator who uses a Montgomery knows his conscience will never be troubled by the thought that a life lost or an injury sustained might have been prevented had a safe hook been provided. Note the table of sizes, etc., above. Then decide, for your own sake as well as your drillers' that your next hook will be a SAFE one—a Montgomery.

TITUSVILLE FORGE COMPANY

Titusville, Pa.

TIFOCO products are handled in the Mid-Continent and Coastal Fields by the Continental Supply Co.; for export, by the Continental Well Supply Co., 2 Rector St., New York. Special Mid-Continent Representative: L. S. Allen, Care Rex Machinery & Supply Co., Tulsa. Special Colorado and Wyoming Representative: L. E. Nebergall, 1375 Lincoln St., Denver.



Points of Excellence

There is no such thing as "Just as Good."

Each different make of tank have certain outstanding features which other tanks do not possess.

Five main points are present in any tank—Material, Paint, Fabrication, Construction and Erection. We use Armco Ingot Iron which has proven the longest lasting and most workable material for tanks. Our paint absolutely resists salt water and gasoline. The fabrication is exact due to modern machinery. Our construction is the strongest type of any bolted tank. The erection of our tank is very fast, and is tight when erected.

Bolted and Welded Tanks

GANTZ TANK Company

SAPULPA, OKLA.

INITIAL OUTPUT REGISTERS SLIGHT GAIN

(Continued from Page 62)

brought in late in the month, is now burning and is visible for 40 miles.

WYOMING

Summary of Field Operations

Dist.—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Big Muddy	0	0	0	0	0	5	5
Salt Creek	67	13,345	2	0	68	118	186
Lance Creek	0	0	0	0	0	4	4
Big Horn Basin	0	0	0	0	14	31	45
Lost Soldier	6	300	3	2	9	41	50
Rock River	0	0	0	0	1	19	20
Fremont Co.	0	0	0	0	2	23	25
Osage	5	85	0	0	7	8	15
Natrona Co.	0	0	0	0	0	21	21
Lincoln Co.	1	30	0	0	2	5	7
Baxter Basin	1	0	1	0	2	9	11
Miscellaneos	0	0	0	0	3	11	14
Total July	80	13,760	6	2	108	295	403
Total June	54	10,003	1	3	118	336	454
Difference	26	3,757	5	1	10	41	51

MONTANA

Dist.—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Cat Creek	2	75	1	0	1	21	22
Sunburst	21	6,125	8	0	14	34	48
Miscellaneous	3	0	3	0	5	68	73
Total July	26	6,200	12	0	20	123	143
Total June	16	585	6	1	31	154	185
Difference	10	5,615	6	1	11	31	42

COLORADO

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
All fields	2	50	0	1	8	39	47
Total June	0	0	0	0	11	36	47
Difference	2	50	0	1	3	3	0

UTAH

District—	Rigs	Drg.	Ttl.
All fields	1	25	26
Total June	1	29	30
Difference	0	4	4

NEW MEXICO

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
All fields	0	0	0	0	2	12	14
Total June	3	600	1	0	3	10	13
Difference	3	600	1	0	1	2	1

Wyoming's increase in completions and production in July came mostly from the Salt Creek Field which had 22 more completions and 5,677 bbls. more new production. The Wyoming Field had 51 less operations at the close of the month.

Montana had 10 more completions and 5,615 bbls. more new production, mostly from the Sunburst Field. The State had 42 less new operations at the end of July.

EASTERN FIELDS

Summary of Wells Complete

Field—	Comp.	Prod.	Dry	Gas
Allegany	37	56	0	0
Bradford	100	236	3	0
Middle Field	12	28	0	1
Venango-Clarion	39	53	0	3
Butler-Armstrong	9	7	4	0
S. W. Penn.	17	10	4	7
West Virginia	97	362	22	37
S. E. Ohio	97	826	23	8
Total July	408	1,576	56	56
Total June	397	1,470	53	74
Difference	11	106	3	18

Field—	Rigs	Drg.	Ttl.
Allegany	14	30	44
Bradford	30	97	127
Middle Field	3	8	11
Venango-Clarion	3	28	31
Butler-Armstrong	11	18	29
S. W. Penn.	16	28	44
West Virginia	56	170	226
S. E. Ohio	34	98	132
Total July 31	167	477	644
Total June 30	161	401	562
Difference	6	76	82

There was but little difference in field operations in the Eastern fields in July as compared to June. There were 11 more wells completed with a gain of 106 bbls. in initial production. There was more new work in progress during July, there being 6 more rigs and 76 more drilling wells.

CENTRAL OHIO

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Licking	0	0	0	0	0	1	1
Knox	5	14	0	2	2	3	5
Ashland	5	0	2	3	3	8	11
Medina	5	0	2	3	4	6	10
Lorain	1	0	0	1	1	4	5
Wayne	8	21	0	6	10	25	35
Richland	2	0	0	2	0	3	3
Hocking	2	0	1	1	4	1	5
Holmes	5	135	1	1	6	18	24
Coshocton	0	0	0	0	2	1	3
Jackson	0	0	0	0	3	3	6
Athens	4	0	0	4	0	9	9
Meigs	0	0	0	0	3	0	3
Cuyahoga	0	0	0	0	0	2	2
Crawford	0	0	0	0	0	1	1
Summitt	0	0	0	0	0	3	3
Total July	37	170	6	23	38	88	126
Total June	24	91	0	19	50	81	131
Difference	13	79	6	4	12	7	5

Just at the present time the Central Ohio Field is not showing its usual activity, as the large gas operating concerns have let up to a considerable extent in their hunt for natural gas, but a little later all will start active work again. The drill has not been able to find anything large in the gas area and it looks as though the West Virginia product will be heavier drawn upon. There are still great possibilities for gas along the Ohio River in the southern section of the State, between Cincinnati and Portsmouth, for there is a long stretch of territory that has not been given even a fair test.

In completed work, July made a better showing than June. The month shows 37 completiions, 8 of which were oil, with a production of 170 bbls., 6 dry holes and 23 gas wells. When compared with the June figures, this shows an increase of 13 in completed wells, three more oil wells, 79 bbls. more oil production, 6 more dry holes and 4 more gas wells. The entire 23 gas wells will hardly average above 500,000 feet each, which is far above the average of a few years ago.

New work under way shows a slight falling off, for at the close of July there were 38 rigs up and building and 88 drilling wells, against 50 rigs and 81 drilling wells at the close of June, a decrease net of 5 in new work.

LIMA FIELD

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Wood	12	143	2	0	2	19	21
Hancock	6	187	0	1	2	7	9
Allen	2	25	0	0	0	4	4
Auglaize	3	22	0	0	1	5	6
Sandusky	2	35	0	0	0	1	1
Mercer	12	49	0	1	3	7	10
Van Wert	3	45	0	0	1	1	2
Seneca	0	0	0	0	0	2	2
Lucas	0	0	0	0	0	1	1
Ottawa	4	54	0	0	0	2	2
Darke	4	25	1	0	0	7	7
Shelby	8	35	0	3	0	6	6
Paulding	4	220	0	0	2	5	7
Hardin	4	35	0	1	0	4	4
Wyandot	1	50	0	0	0	0	0
Michigan	0	0	0	0	0	2	2
Total July	65	1,030	3	6	11	74	85
Total June	63	1,070	6	1	9	65	74
Difference	2	40	3	5	2	9	11

Operations continued at an interesting clip in the old Lima fields of Northwestern Ohio during July, regardless of the decline in the price of crude. The month showed a slight gain over the June figures and August bids fair to show greater activity. The opening of new fields in advance of previous production accounts for much work. The Shelby County field, the Paulding County Field, the Hardin County Field, along with the find of a good well near Carey in Wyandot County, during the month, make a vast difference and add much territory to be developed in the future, with prospects of additional extensions.

During July a total of 65 wells were completed, with 3 dry holes, 6 gas wells and a new production of 1,030 bbls. When compared with the June figures, show a gain of two in completed wells, 40 bbls. decrease in flush production, 3 less dry holes, 5 more gas wells.

The close of July looks encouraging for new work, there being 11 rigs up and 74 wells drilling against the figures at close of June of 9 rigs and 65 drilling wells, a net gain for July of 11 in new work.

ILLINOIS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Clark	6	260	0	2	2	7	9
Cumberland	0	0	0	0	0	1	1
Crawford	2	0	2	0	0	6	6
Lawrence	2	6	0	0	0	2	2
Clinton	0	0	0	0	0	1	1
Marion	1	10	0	0	0	0	0
Monroe	1	35	0	0	0	0	0
Coles	1	1	0	0	0	1	1
Douglas	0	0	0	0	0	1	1
Edgar	0	0	0	0	0	1	1
Wabash	2	145	0	0	1	9	10
Union	0	0	0	0	0	1	1
Fayette	0	0	0	0	1	0	1
Total July	15	457	2	2	4	30	34
Total June	24	735	5	0	2	19	21
Difference	9	278	3	2	2	11	13

The only feature for the Illinois Field for the month of July, is the increase shown in new work under way. The Martinsville pool in Martinsville, Township, Clark County, and the Wabash County Field are the two leaders in new work. The close of July showed 4 rigs up and 30 wells drilling, for a total of 34, while the June figures were 2 rigs and 19 drilling wells, a net gain for July of 13.

The month shows a heavy decrease in

What the Blue Triangle Means to the Oil or Gas Man

ARMCO-Ingot Iron is Used for:

Tanks
Wagon Tanks
Roofing
Siding
Barrels
Culverts
Flumes
Fence Wire
Lath
Brine Lines
Vapor Lines
Run-out Lines
Agitators
Cooling Towers
Evaporators
Heat Exchangers
Boiler Tubes
Stills
Tubing

ARMCO-Ingot Iron, the *iron* that bears the *blue* triangle, resists the attack of salt water on the bottom of tanks. It holds off corrosion caused by distillates. Outside it withstands the attack of rust, caused by contact with moisture and air.

Striking proof of the lasting qualities of ARMCO-Ingot Iron is this: The National Refining Co., Coffeyville, Kansas, used both ARMCO-Ingot Iron pipe and steel pipe in the same condenser box. Within the first year the steel had to be replaced, but the ARMCO-Ingot Iron pipe was still in serviceable condition after seven years.

Ask for a copy of:
"The Story of Commercially Pure Iron"
It's a booklet worth reading, and we shall be glad to send it.

ARMCO INGOT IRON

The American Rolling Mill Company, Middletown, Ohio, U. S. A.

The Armco International Corporation, Cable Address—ARMCO, Middleton, Ohio

Patented Oct. 21, 1913

THE *ORIGINAL* BOLTED STEEL TANK

and the *BEST*

Since we made the *original* bolted steel tank there was nothing to prevent our making the *best*. No patents stood in our way warning us not to trespass.

So we *did make* the BEST. Then we patented a feature of our tank which is of basic importance. This patented feature is illustrated in the circle above. It causes the parts to fit together *exactly*. Gasketing of uniform thickness fills up the joints and seams. The tedious job of calking is eliminated.

MADE OF KEYSTONE COPPER STEEL

We have perfected every *other* detail of MALONEY Tanks, as well. We believe our product to be unsurpassed by any other in *any* respect.

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Offices and Plant: Tulsa, Okla.

12 to 3,000 Bbls., Inclusive

Prompt, Dependable Export Service

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MALONEY PATENTED BOLTED COPPER-STEEL TANKS

MALONEY

completed wells there being 9 less completed, 278 bbls. less new flush production and two more gas wells, while dry holes, a decrease of three is shown.

INDIANA

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Wells	0	0	0	0	0	1	1
Jay	9	102	1	0	0	7	7
Adams	0	0	0	0	0	1	1
Huntington	1	0	1	0	0	0	0
Delaware	0	0	0	0	0	1	1
Randolph	1	5	0	0	0	0	0
Gibson	2	15	1	0	0	2	2
Sullivan	0	0	0	0	0	2	2
Knox	0	0	0	0	1	1	2
Harrison	0	0	0	0	0	1	1
Laporte	0	0	0	0	0	1	1
Hendricks	0	0	0	0	0	1	1
Total July..	13	122	3	0	0	18	19
Total June..	12	145	6	1	2	22	24
Difference ..	1	23	3	1	1	4	5

Quietuae prevailed in the Indiana fields for July, and there is little prospect for a revival, although there are large areas of good looking acreage yet to be developed, not alone in the old defined territory, but in many parts of the state.

The July figures show a total of 13 wells were completed, with 122 bbls. new production and 3 dry holes. This is an increase of one over the June report of completions, 23 barrels less production, 3 less dry holes and one less gas well. At the close of July there were one rig up and 18 wells drilling against the June figures of 2 up and 22 wells drilled, a net loss of 5 in new work.

KENTUCKY-TENNESSEE

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Wayne	6	6	4	0	2	7	9
Powell	1	5	0	0	1	1	2
Estill	5	11	2	0	0	2	2
Wolfe	1	25	0	0	0	2	2
Morgan	0	0	0	0	0	1	1
Lee	10	425	1	0	2	12	14
Lawrence-Johnson	18	450	0	1	4	25	29
Johnson-Magoffin	4	30	0	0	1	27	28
Allen	45	698	14	0	2	20	22
Warren	22	318	3	0	0	24	24
Simpson	2	156	0	0	0	5	5
Barren	24	176	3	1	2	23	25
Edmonson	0	0	0	0	0	1	1
Cumberland	7	130	4	0	0	23	23
Monroe	0	0	0	0	0	6	6
Owensboro district	15	96	6	0	2	10	12
Russell	0	0	0	0	0	7	7
Metcalf	2	0	1	1	0	1	1
Owsley	1	0	1	0	0	1	1
Hopkins	0	0	0	0	0	1	1
Hardin	1	0	1	0	0	0	0
Breathitt	0	0	0	0	0	1	1
Rowan	0	0	0	0	0	1	1
Laurel	0	0	0	0	0	2	2
Elliot	0	0	0	0	1	4	5
Floyd	2	65	0	0	1	2	3
Harlan	0	0	0	0	1	0	1
Pike	0	0	0	0	0	1	1
Bell	0	0	0	0	0	1	1
Adair	0	0	0	0	0	1	1
Larue	1	0	1	0	0	0	0
Henderson	0	0	0	0	0	1	1
Taylor	0	0	0	0	0	1	1
Green	1	4	0	0	0	0	0
Kentucky	168	2,595	41	3	19	214	233
Tennessee	7	4	5	0	3	12	15
Mississippi	3	0	3	0	6	20	26
Alabama	0	0	0	0	0	11	11
Georgia	0	0	0	0	1	4	5
Total July..	178	2,599	49	3	29	261	290
Total Jun...	178	2,832	42	3	17	319	336
Difference....	0	233	7	0	12	58	46

Owing to the shallowness of production, the operators in the Western Kentucky fields are completing a great many more wells than the operators of the Eastern Kentucky division by a large percentage. During July a total of 178 wells were completed in the Southern Fields, consisting of Kentucky, Tennessee, Mississippi, Alabama and Georgia. The completions in Kentucky totalled 168 completions, with 41 dry holes, 3 gas wells and a new production of 2,595 bbls. There were 48 completions in the Eastern Kentucky division and Western Kentucky completed 120 wells. Cost of operations in the Eastern Kentucky Field especially in the Big Sand Country is much more expensive on account of the heavy cost of moving materials. There were 10 completions in Tennessee and Mississippi, only two being producers, the others being dry holes.

The July figures when compared with the figures for June, show no change in the number of completions in the entire Southern Fields, while new production was 233 bbls. less and 7 more dry holes, and no change in the number of gas wells.

At the close of July, there were 29 rigs up and 261 wells drilling, for a total of 290 in new work, a decrease from the June figures of 46 in new work, indicating that a shut down movement is being inaugurated over the fields. Florida operations are not compiled for July, on account of the inability to secure actual reports.

GAS DISPUTE SPREADS IN SOUTHWEST MISSOURI

CARTHAGE, Mo., Aug. 2.—The 3-part gas rate controversy has crossed the State line from Kansas into southwest Missouri. Cities with natural gas in this section are served by local distributing companies, the gas being piped from Oklahoma by the Empire Pipe Line Co. Officials of the distributing companies declare the pipe line company will not furnish gas unless franchises are based on the 3-qart rate.

The firm at Carthage is operating without a franchise and threatens to quit unless one is granted by September 1. The Carterville City Council rejected the 3-part rate. The company countered by appealing to the Public Service Commission to raise the fiat rate in effect. At Webb City most of the city officials were elected on pledges to oppose the 3-part rate, althhough it is indorsed by the chamber of commerce.

The 3-part rate includes a service charge, a demand charge and a charge for gas consumed. Companies favor it because it provides a steadier year-round income.

PRE-HEATING UNIT FOR AMERICAN PLANT

WICHITA FALLS, Tex., Aug. 2.—The American Refining Co., one of the two largest local plants, is installing a preheating unit at its refinery in North Wichita Falls, at a cost of approximately $70,000. The unit will increase the plant's capacity to 8,000 bbls. adily.

This unit serves as a step between the skimming and cracking processes. It serves to detach certain elements that are left in the crude after skimming, and which ordinarily are sent direct to the cracking plant. As the company pays a royalty to patent owners, based on the amount of fluid sent through the cracking units, the new unit is expected to effect a saving by reducing the quantity of that fluid.

BRECKENRIDGE GASOLINE

BRECKENRIDGE, Tex., Aug. 2.—So far this month the three railroads entering Breckenridge have shipped out 305 cars of gasoline from the refineries located at this place. W. E. Ricks, assistant to Pres. R. Q. Lee, of the Cisco and Northeastern road, was here superintending the loading of a train of 34 cars of gasoline, which was followed by another train of 15 cars. Ricks stated his road had shipped 175 cars of gasoline from the refineries here. Inquiry of the agent of the Wichita Falls, Ranger & Fort Worth and Wichita Falls & Southern Roads produced the information that those lines had carried out 180 cars up to the present.

OIL FOR CZECHOSLOVAKIA

Reports from Prague state that the refinery in Pardubitz, which belongs to the Fanto group, will shortly begin refining Persian and American crude oils. The Kralup refinery has already been adapted for treating American oils exclusively, and has erected considerable tank storage in Hamburg to accommodate its imports of crude.

ANOTHER WELL AT HANOVER

A German newspaper reports that the Konkordia Co., which has been drilling near both the Nienhagen and Elwerth wells, has brought in a well in which the first day's production was about 1,000 kilos (say a ton). The production is from the so-called second oil zone and the well is being deepened.

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ENGINEERS know that to obtain the necessary decrease in pumping costs, certain requirements must be met. The following features of *ROOTS Rotary Pumps* meet these requirements:

Ability to handle the lightest gasoline or heaviest crude with equal facility.

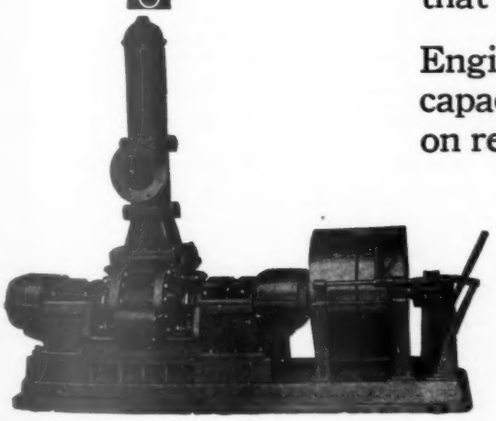
No internal lubrication required.

Absence of valves, springs and other small parts to cause wear, thus making a simple, rugged pump for continuous, heavy operation with a lifetime of use and but little repair.

Source of power may be turbine, steam engine or motor, direct connected, geared or belt driven, thus allowing *ROOTS Rotary Pumps* to be used under almost any conditions.

All these features give operating economies that are surprising.

Engineering data on specifications, sizes and capacities of *ROOTS Rotary Pumps* will be sent on request.



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REFINING AND MARKETING

OVER 400 STATIONS IN CLEVELAND, OHIO

CLEVELAND, Ohio, Aug. 2.—Greater Cleveland has 409 gasoline filling stations, according to a survey made by the Cleveland Plain Dealer. This is approximately one station for 400 automobiles.

"At the present rate of propogation of stations," according to the newspaper, "it will not be long until a driver need never trouble to look at his gasoline gauge; he always will be right beside a station when his car goes dead."

Eighteen refining, jobbing and retailing companies serve Cleveland through these 409 drive-in stations, and the number does not include the curbside pumps, in some of which "bootleg" gasoline is dispensed—now to be had here for as low as 16 cents a gallon if you know where to get it.

Cleveland's total was obtained by the writer asking each company the number of drive-in stations it maintains.

Here is the inventory of stations in Cleveland and suburbs bearing the signs of the respective companies:

Standard Oil of Ohio	97
Brooks Oil Co.	51
Columbia Refining Co.	35
National Refining Co.	35
Sinclair Refining Co.	32
Cities Service Oil Co.	30
Pecahontas Oil Co.	23
Great Western Oil Co.	17
Canfield Oil Co.	16
Midcontinent Producers & Ref. Corp.	13
Fairmount Oil Co.	11
Midvale Oil Co.	11
Motorade Corp.	9
Seneca Oil & Gasoline Co.	6
Commercial Oil Co.	5
Dorn Oil Co.	4
Chieftain Oil Co.	3
Soline Oil Co.	3
Girard Bros. Co.	2
Individuals	3

"Not all these stations are operated by the companies named. Practices differ. Standard and National Refining companies, for instance, operate all their stations listed, while Cities Service operates 16 and sells to 35 others, including curb. The Brooks company operates 45 and sells to the remaining six."

"The 45 more stations probably to be opened this year do not include new companies which may enter this territory. Officers of The Texas Co., which sells all over the world, said it is likely to come into Cleveland."

"The Soline Co., credited with only three stations, is building five more and officials said 25 will be opened in four or five months. Some of its former stations are now operated by another company."

NATURAL GASOLINE MEETING AT BURBANK

The third regional meeting for gasoline plant operators held in the Burbank Field, July 31, under the auspices of the Association of Natural Gasoline Manufacturers, was poorly attended, and was finally abandoned as a result of a heavy storm which broke about noon. George M. Massen, of Kansas City, Mo., representing the Dearborn Chemical Co., repeated his talk on "Water Treatment," delivered first at the Drumright operators' meeting. Otto Peters, superintendent of the Keifer plant for the Chestnut & Smith Corp., gave a paper covering "Treatment of Discolored Gasoline." O. H. Schonwald, superintendent gasoline department for McCaskey & Wentz, Ponca City, presided.

SCOUTS SECURE CHARTER

AUSTIN, Tex., Aug. 2.—There was filed here the charter of the National Oil Scouts Association of America, of Wichita Falls, Texas, with no capital stock. The purpose is to foster and perpetuate a closer and more binding union between oil scouts of America. The incorporators are R. I. Peveto, S. M. Semple, B. M. Bell.

INCREASING BULK STORAGE

CHICAGO, Aug. 2.—The Acme Petroleum Co. of Chicago, is increasing its bulk storage at Riverdale, a manufacturing suburb on the Calumet River, just beyond Pullman, near Chicago. The company will carry bulk stocks of gasoline, kerosene, fuel oils, gas oil and distillates. It does no tank wagon business and owns no trucks, but carries these stocks for use of its wholesale customers.

CHARTER MARKETING CONCERNS

OKLAHOMA CITY, Okla., Aug. 2.—The T. T. Eason Oil Co. of Enid, recently chartered with a capital stock of $50.000, has acquired several service stations in southwestern Oklahoma and will be operated exclusively as a marketing concern, according to a report filed with the State Issues Commission. T. T. Eason, general manager of the Healdton Oil & Gas Co. and the Bolene Refining Co., is president of the new company. A. C. Hatton of Enid, is general manager.

LINCOLN REFINERY CHANGES

CHICAGO, Aug. 2.—The refinery of the Lincoln Refining Co., at Robinson, Ill. is being extensively overhauled and the capacity is being increased. This company is now controlled by the Ohio Oil Co. and will be operated to capacity. The company has adopted the coined word, "Linco" to designate its petroleum products. The refining organization has a number of filling stations in Indiana and is expected to enlarge its direct distribution facilities.

TREATING DISCOLORED GASOLINE; TRACED TO THE LOW STAGE MAKE

*By Otto Peters
Chestnut & Smith Corp.

The gasoline plant operator is confronted with the problem of treating discolored drip gasoline as gathered from the field lines and discolored gasoline made at the plant, which, in my experience, has always been treated to the low stage make.

Making discolered log stage gasoline denotes trouble, At plants where there is more than one low stage unit the first indication of discolored gasoline would probably be noticed in the tank used for making. The trouble can then be traced to the accumulator tanks and by taking sample from accumulator tanks, the unit at fault can be found.

After locating the unit at fault, we realize the only part of the low stage gas circuit that could affect the color of the gasoline made is the low stage compressor, and we further realize that it is not only the lubrication of the compressor but also its mechanical condition that affects the making of low stage gasoline.

Compressor Lubrication

My experience as a plant operator makes me feel most certain that the lubrication of the compressor plays a vital part in this trouble, and with that in mind, I think best to touch briefly on compressor lubrication.

We provide lubrication on compressor cylinders to maintain piston seal and a complete film of oil on cylinder wall to prevent wear or cylinder and rings.

In casinghead work, where gas compressed is casinghead gas, it has an affinity for pure mineral lubricating oil and therefore sometimes necessitates the feeding of excessive oil to the compressor cylinder, because part of the lubricating oil is absorbed by the casinghead gas and therefore we must feed enough oil so that what is left will satisfy the cylinder and rings although we always have before us the problem of keeping down the lubricating oil feed to compressor cylinder so that there will be the least possible amount picked up by the gas so no discoloration will occur in the gasoline.

In casinghead work, most all compressor bearings are lubricated by splash system and in selecting a medium bodied, pure mineral oil especially manufactured mineral oil especially manufactured for compressor cylinder lubrication, by using it in the crank case, if any oil gets on the rod and is carried into the cylinder, it is still the correct oil. Oil used on compressor cylinders in gasoline work has several factors to be considered.

Oil Requirements

Acompressor with rotary valves (Corliss Type) will require the same grade of oil but a larger quantity over a period of time than a poppet type valve. In fact, no the latter type of valve, very little, or practically no oil is required and our aim would be to satisfy the piston rings and cylinder only, whereas on the Corliss type, due to the larger wearing and bearing area of the values and the fact that oil must be applied direct to the end or center of valves, more oil is required, in which case we can always rely on piston and cylinder being well, or over-lubricated if these valves are barely satisfied. If an exceptionally wet or rich gas is being handled, the gasoline wash becomes a factor and a straight mineral oil will be rapidly cut away, since it is necessary to use a compounded oil, so compounded that it will withstand the gasoline wash, and maintain a lubricating film on the cylinders at all times.

In concentrating the trouble of discolored low stage gasoline in the low stage compressor, I can olly say that we must carefully consider the quality of oil used; means of application and quantity used. Assuming then, that these factors are OK, the only possible other trouble is oil being carried over on the rod. We have in mind that the compressor has an intake of so many inches of vacuum. This vacuum easily sucks oil off the rod if the packing enclosing the rod should leak, and in this connection I can oly recommend that the level of oil in crank case be carried as low as possible. It may be that the oil in crank case of compressior is different from the oil used in compressor cylinder, so that if only a slight amount of oil is carried over, it affects the gasoline. On the other hand, should the oil be the same, the oil carried over would cause an excessive amount of oil being mer to compressor, and of course, an excessive amount of oil will surely cause discolored gasoline.

Oil Traps

Where oil traps are installed on the discharge line of compressor, they too, must be looked after. They are of limited capacity, and I feel they should be periodically cleaned. One other factor I have in mind is the volume of low stage gasoline made over a period of 24 hours—that is to say, where the gas has an affinity for oil and carries oil vapor in suspension, I believe it is so small an amount that several thousand gallons made in a day will absorb it so that it practically is not there. On the other hand, in plants making less than 100 gallons a day, it is almost an impossibility ot entirely prevent discolored low stage gasoline.

In plants under my supervision, we use steam stills for treatment of dis-

*Delivered at third regional meeting for gasoline plant operators in Burbank, Okla.

(Continued on Page 123)

WOODMAN-LONGSHORE FORM CO-PARTNERSHIP

NEW YORK, Aug. 2.—A. C. Woodman, who recently resigned as vice president of the Sinclair Consolidated Oil Corp., and C. H. Longshore have formed a copartnership under the name of the Refiners Petroleum Corp. and have opened offices at 17 Battery Place. The concern will engage in the buying and selling of petroleum products for domestic and foreign trade. Mr. Woodman says that all details of the organization have not been worked out but will be announced later. Mr. Woodman is widely known is marketing circles due to the fact that he was president and active head of the old Union Petroleum Co. before and after it was taken over by the Sinclair interests about five years ago. Mr. Longshore is also widely known, having been closely associated with Mr. Woodman in the past.

CARELESSNESS CAUSES UNLOADING EXPLOSION

The Bureau of Explosives has issued Accidental Bulletin No. 64, in which considerable space is given to the matter of gasoline explosions. The initial article was entitled "Black Smoke Instead of Gray Matter," and described an explosion due largely to the carelessness of bulk station employes in unloading a car of gasoline. Later investigation showed that the vapor tension of the liquod remaining in the car was 151 pounds. The car did not have the necessary placards; it was billed improperly and did not have the proper safety devices, hence the explosion.

Questions concerning the transportation of gasoline are also treated in additional short articles in the bulletin. One entitled, "A Mystery of the Rails," told of a disastrous fire which resulted from a railroad wreck in which the train contained a car of gasoline. The evils of lightning, sparks and carelessness in handling gasoline were also stressed.

TAKES OVER MEMPHIS STATIONS OF REED CO.

The Producers & Refiners Corp., with two refineries in Oklahoma and one in Wyoming, has taken over the bulk and service stations of the Reed Oil Co., located at Memphis, Tenn. Thirteen drive-in stations are included in the purchase. The stations are among the largest and most attractive in the city.

The Reed Oil Co., which still has stations at Jackson and Nashville, Tenn., and Pine Bluff, Ark., has handled Producers & Refiners Corp. gasoline for some time. The gasoline will in the future be retailed under the Producers & Refiners Corp. trade name of "Parco."

KNOX REFINERY AT TEXAS CITY

OKLAHOMA CITY, OKLA., Aug. 2—The Knox Process Corp. of Delaware, which recently was admitted to Texas with a capital of $3,000.000, has under construction a six-unit refinery at Texas City to cost about $500,000. The first unit will be completed in September. The process involves the use of electricity to extract gasoline from low-grade oils. The first unit of the plant will be used for experiments with the process on various kinds of crude.

PLAINS PIPE LINE

AUSTIN, Tex., Aug. 2.—Charter of the Plains Pipe Line Co. of Wichita Falls, Texas, with capital stock of $100,000 was filed in the Secretary of State's department. It was incorporated by W. M. Priddy, W. W. Silk, I. P. Chidsey, J. R. Elliott, W. W. Fraser.

The lower the market price of gasoline the greater the need for the Dubbs Cracking Process

Nothing else will do so well to tide over a market emergency and do it at a profit even when other methods of producing gasoline are doing it at a loss

Universal Oil Products Company
Owners of the Dubbs Process
312 South Michigan Ave
Chicago Illinois

Claims Advanced for Linton Process

Described as a Method of Conversion, Not of Cracking or Destructive Distillation. More Gasoline and More Mileage

By Charles E. Kern

WASHINGTON, D. C., August 4.—Vastly greater efficiency is being claimed for the gasoline process located at Wawantusa, a suburb of Milwaukee, Wisconsin, than has ever been realized by any other method for the extraction of gasoline from crude petroleum. This is known as the Linton gasoline process devised by E. O. Linton, fuel oil expert of the Inland Steel Co., and financed by Ross J. Beatty, of Chicago, formerly vice president and chairman of the board of the Inland Steel Co.

The claims put forth in respect to this process are unique in many respects. It is not intended here to do more than present these claims which are inciting interest to such an extent that two of the largest oil companies have shown an interest in verifying them. Without doubt practically all oil technologists will refuse to accept the reasoning that applies to this chemical process and will require actual demonstration. The writer held aloof from giving publicity to these claims, which up to this time have been but little discussed outside of professional circles, except for a previous mention in The Oil and Gas Journal, until he was reliably assured that, now that the process is looked upon as being practically perfected, the company known as the Linton Gasoline Process Co., is willing to permit any responsible person to bring his own crude oil, fuel oil or residum to the plant, take full charge of the process and run it under conditions giving the utmost assurance that the results obtained are genuine in every respect. Also that this company with the Delaware incorporation has no stock on sale and has no intention of placing stock on sale at this time if at all. All that will be necessary to arrange a demonstration of this process will be to communicate with Eastman A. Burrows, Security Building, Chicago.

The Linton gasoline process consists of a 100-bbl. plant, the plans of which contemplate additional facilties by adding 100 bbl. units.

Termed a Converter

This apparatus is termed a converter rather than a cracking installation because it is said that little or no cracking takes place, the gradual treatment of the oil producing isomerization rather destructive distillation. This means that the molecules are merely disturbed allowing the constituent atoms to resume new relationships. In other words it is a case of converting heavy hydrocarbons into lighter ones without loss in volume and without the presence of carbon in either the apparatus, distillate or residuum.

The oil technologist will not take kindly to this statement because such an indicated actual disappearance of the carbon from the oil is not contemplated by any theory of distillation that has been brought forward. All ideas of the chemist in respect to carbon revolve about the idea that it is a basic material that must be eliminated or at least partly removed. The Linton process contemplates a change in the nature of the carbon and its practical elimination in that way. Tests have shown, it is stated, that there remains after this process carbon only to the extent of three one-hundredths of one per cent.

The apparatus used in the Linton process is described as having a preheater by which the temperature of the feed oil is raised to approximately 400° F. when it is spilled on the apex of inverted V shaped steel planes, longitudinally installed within a closed cylinder heated to about 450° F. The lighter elements of the oil vaporize as they flow down these planes in a thin sheet, the vapors passing into a tower of novel design and thence by gravity into the condenser. The heavier elements which have not vaporized pass into a residuum receiver, the hot vapors arising from which are allowed freely to commingle with those in the cylinder. It will be seen that the high temperature required in the cracking process is not present in this plant.

Technologist Questions It

The writer has briefly discussed these claims with a petroleum technologist of the highest standing who has no interest in them and who has not examined either the plans or the plant. He regards this statement of the case in a way quite similar to the attitude of the scientific world 25 years ago toward the proposition that a heavier-than-air machine could be made to fly any considerable distance above the surface of the earth. As that was regarded as in opposition to the laws of gravity so are some of the claims of the Linton gasoline process regarded by him as questionable and at least apparently unscientific. This especially is true in respect to the elimination of carbon.

Tests of this progress, conducted by Doctor R. B. Heyne, chemical engineer, formerly connected with the Magnolia and the Gulf refining companies, with the distillate in automobiles of various make and under varied conditions, it is claimed, showed an increase in efficiency of over 25 per cent compared with other motor spirits and gasolines; also that this distillate possessed all elements contributing to slow flame propagation to obtain which in other feuls it is necessary to add a percentage of so-called dope entailing extra expense.

It is also claimed that due to its noncarbon producing qualities the Linton process apparatus operates continuously so that no shut downs are required to clean out coke and other carbon deposits and as it functions at atmospheric pressure only, all danger of explosion is eliminated.

Obtain "More Gasoline"

Owners of the process maintain that they can obtain 25 per cent of gasoline from the residuum obtained from gasoline cracking processes. As such residuum is valued at about 75 cents a barrel the importance of this claim may be readily understood. They also claim that this motor spirit can be obtained at 30 per cent less cost than by any other known means.

Operating on the average Mid-Continent fuel oil the Linton process, it is claimed, recovers 73 per cent in motor spirit while on low grade tar residuum from pressure stills it obtains a yield of 50 per cent motor spirit. A petroleum engineer of wide reputation whose name can not be used here examined this process and wrote his opinion of the results obtained. This statement follows:

"There is in operation now a small unit built on the ideas of the Linton process. The writer investigated this unit recently and there found coroboration for the theories advanced and the work done by the authorities cited.

"With the permission of Mr. E. A. Burrows, who is developing this process for the inventors, I am giving a brief review of my observations on this equipment. The Linton process had its originiation in an observation made by a man who accidentally dropped some fuel oil on a hot steel plate which happened to be inclined. He noticed this oil traveling down the inclined plate giving off vapors at all the points of its travel down the plate. At the end of the plate he found residue entirely different in nature from the oil which dropped on the plate. He communicated his observations to some of his associates and they together took up the matter with an engineer in whom they had confidence, to find out whether the observations made were of any value.

"The Linton process as it exists today is the result of development work done by capable engineers who utilized the original observations made by Mr. Linton. They are no longer in doubt as to the value made by Mr. Linton. They are no longer in doubt as to the value of the accidental discovery. The inclined plans heated to temperatures varying from about the boiling point of the lowest boiling constituent of a mixture of hydro-carbons to temperatures slightly above the boiling point of the highest boiling fractions, even to this day constitute the distinctive feature of the Linton process.

Process Described

"An apparatus embodying this inclined plane has been constructed which is a highly satisfactory hydro-carbon apparatus. As viewed by me, it received a charge of paraffin hydrocarbon of 27 gravity and produced 73 per cent of a hydro-carbon mixture boiling below 410° F. The residuum taken from the apparatus was of a highly viscous nature and contained only a very small amount (3/100 of 1 per cent) of colloidal carbon. Also there was no carbon of any kind left in the system on the completion of the operation. The apparatus throughout the run had none but atmospheric pressure on any part, in fact, a perfect equilibrium was maintained within the system. This also evidenced by the fact that the vapor line had a vent which was open to the air during the entire run. The overhead distillate of this run was composed of a high percentage of low boiling point hydro-carbons other than paraffin, while the degree of conversion was remarkable as was also the absence of carbon; more noteworthy was the fact that the overhead distillate contained napthenes and benzol in predominating proportions.

"During the run the temperatures maintained within the system were far lower than those reached in the pressure processes. In fact the highest temperature reached at any point was only 5 to 10 degrees higher than the maximum boiling point of the charge. This is very noteworthy, as in the pressure processes far higher temperatures are necessary for the work of conversion. In these pressure processes, the boiling points range upward in the same proportion in which pressure is applied and the difference between the boiling point of the same hydro-carbon at, 100 pounds of pressure, is frequently as high as 150° F.

"It is obvious that equipment cannot deteriorate as rapidly when subjected to comparatively low temperatures and under pressure.

Little Fire Danger

"Another very great advantage this system of converting hydro-carbons would have over the pressure processes is the fact that only a very small amount of oil is in the heat transference zone at any one given time. Should any break occur during the run, the possibility of a disastrous fire is perfectly nil. The claim of a comparatively small portion of oil being on the heating surfaces at one time is made for a number of pressure processes, and while this is true we have not seen any pressure processes which would not release by virtue of the pressure on the system a very large proportion of the oil under treatment in case of a break within the system.

"The methods controlling the work of this Linton apparatus are very simple. The temperature of the inclined plates and the flow of the oil over these being the only factors to be taken into consideration, otherwise this apparatus is handled just like an ordinary shell still.

"The complete absence of carbon coupled with the overhead products obtained, leaves no doubt that this equipment isomerizes and polymerizes the hydro-carbons charged into it. Apparently the hydro-carbon is never disintegrated but merely dissociated and regrouping without decomposition, naturally creates an avidity for carbon and so this equipment, contrary to the thermol decomposition processes, absorbs carbon into its products instead of eliminating it from the hydro-carbon as is done in the pyrogenic decomposition processes now in use.

Elimination of Carbon

"The most disagreeable feature of hydro-carbon conversion work, namely the production of carbon and fixed gases, is therefore eliminated by the use of the Linton equipment. During the entire time of my investigation of his equipment there was produced neither carbon nor fixed gas. The loss in volume was entirely controlled throughout the runs.

"Most noteworthy is also the fact that results with this equipment are entirely governed by the charge into it. A homogeneous charge produces an overhead of very close range of boiling points, while a hetrogeneous product charged into the equipment yields an overhead product of a longer range of boiling points. This again is in complete harmony with the laws of insomerization.

"Just how far conversion can be carried with this equipment has not been established, but a yield of 73 per cent of gasoline on one throughput is so far beyond what pressure processes are achieving that it is not ery important to establish just how far this conversion could be carried. Due to the construction of the present equipment, I dare say that a small percentage of residuum is advisable as it enhances the rate of the throughput through the equipment and simplifies control of the temperatures in the system during the run.

Commercial Possibilities

"The speed with which this small installation was run and calculations based upon the volumetric capacity and throughput capacity of this equipment lead me to believe that commercial equipment to convert a given amount of a heavy hydro-carbon could be constructed at about one-fourth the cost of the average pressure still.

"The motor fuel produced from the overhead distillate of the runs witnessed was subjected to a great many tests; chemical, physical as well as practical.

"The overhead distillate was of a very faint greenish color and had a distinctive odor resembling that of Pintsch gas. It was found to be easily refinable and the motor fuel produced from it was water-white and sweet in odor.

"Consumption tests made in a Ford, a Chandler, Paige and a Peerless car, showed that 25 to 30 per cent greater mileage was obtained than by the use of the conventional paraffin gasoline. The cars in which it was tested operated smoothly and powerfully under all conditions. These cars were run at speed ranging from 2 miles an hour to 65 miles an hour, in high, on the level and up grade, giving perfect satisfaction and with achievements impossible with the conventional paraffin gasoline.

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CHICAGO GASOLINE ACTIVE AND FIRM

Although Gallonage for Late July Disappointing. Kerosene Slowing Down Somewhat. Increased Demand for Distillates Is Expected. Fuel Oil in Light Demand; Lubricants Dragging. Many Tank Wagon Changes

By J. B. Waldo

CHICAGO, August 2.—The gallonage during July showed a substantial increase

over the amount of gasoline distributed to consumers one year ago, but on the whole it was rather disappointing for the entire month. Of course it is early yet and when returns are received from the entire country or even the whole of the territory served from this city it may prove a little different, yet the reports of typical and large organizations agree that while the gallonage during the first part of the month was 12 to 15 per cent ahead of last year that the increase did not hold and that for the entire month it is not likely that the actual distribution of gasoline will be better than 7 or 8 per cent greater than last year.

Just why the latter part of July was not more favorable cannot be easily explained. The first part was accelerated by the three or four days' holiday coming on the Fourth of July and continuing over the following Saturday and Sunday but the weather man was more favorable to the motorist after July 15. Of course the companies from whom preliminary reports have come to date have a large part of their business or at least a very considerable part right in Chicago.

Market Active and Firm

The market for gasoline has been active and much more firm than the trade here thought could possibly be the case with a crude and tank wagon cut just made by practically all of the leading companies. The brokers and jobbers began at once to seek for some of that 7-cent gasoline that has been prophecied by certain elements in the industry here and elsewhere and seemed surprised that market was firm at 8 cents for Navy to the ordinary buyer and at 7½ cents to the larger buyer who was accustomed to having his views considered. Even the Greenslade order was placed at 7¾ cents for a couple of train loads of New Navy. The only result so far as prices are concerned is that the cuts prevented a determined effort on the part of refiners to put the market up to 8½ cents for Navy and 4½ cents for kerosene. In fact some refiners in the Group did put out such prices the last day of the week preceding the cut in crude and tank wagon.

A prominent oil man who has been out in the country visiting his trade states that one reason why the jobbers are not ordering more largely and in fact not selling more gasoline is that they are hard up for cash. The farmers are hard up and have been holding back from buying but recently since the prices for so many farm products moved upwards they have been buying more largely and asking the station man to wait a little and several complained they had so much money owing them from their farmer customers. There have been some complaints of slow collections locally and this is partly the occasion for it. On the other hand the localities where the cuts are so deep as to leave little or no profits are almost certain to develop slow payments which is one reason why the price cutting will have to come to an end sooner or later.

Less Marginal Complaint

The recent reductions in the tank wagon prices with the earlier concessions made by refiners with marginal contracts have placed the contract buyer more nearly on a parity with the purchaser in the spot market and one hears much less complaint regarding the marginal contracts and much less demand for lower tank wagon prices. Shipments on contracts are stated to be nearly normal in many cases. The marketers are not doing all the business they would like of course but there is a lot of gasoline being sold and jobbers complain they can no longer get prompt shipments, meaning that the car does not leave the refinery within 24 hours after they wire the order. Cosden & Co. was quoting 7¾ cents for Navy for resale and good buyers could purchase at that price from refiners but there were some jobbers who were in the market and found 8 cents the bottom price to them. Generally the large buyer of good credit could buy at 7¾ cents and the rank and file of the jobbers had to pay ⅛ to ¼ cents at the close of the week. The demand for the 60-42—400 gravity and higher is only fair and prices are called easier though there has been little change in the range of quotations here. Blends are dull and the natural gasoline is easier and slightly lower in price.

Kerosene Slower

Kerosene is moving but the demand seems to be slowing down somewhat according to the marketers and concerns with a number of stations report their local managers are not ordering kerosene but this may just be temporary as at the close of the month station managers are accustomed to allow their inventories to run as low as they think safe. The offerings are not excessive and prices are firm at 4 to 4¼ cents.

There is considerable contracting for distillates for the coming season supposed to begin with September 1. The oil jobbers look for a much larger demand as the number of installations has been considerable this summer. The burner makers are very active in pushing their devices. Oil men state they will have to have a wider margin for distribution costs and must make a difference in price between hose and bucket delivery. The Standard is already doing this in its cheaper grade and in the higher grade or Stanolind furnace oil makes a quantity price for over 200 gallons.

Fuel Oil Light

Fuel oil is moving in comparatively small lots. The smaller concerns seem to be able to keep their plants better occupied than the big companies and are purchasing right along. There have been quite a number of orders placed for lots of 50 to 100 cars for delivery over a period. The Illinois Steel Co. is still operating at around 35 per cent of its capacity but is believed to be getting some business ahead. It does not plan to start up on a materially larger scale of operation until it has enough business to insure the operation of the plant at the larger rate for some months. The oil men are going to have some keen competition from the sellers of coal. It is stated that prices for coal were never so low, that is steam coal in the mine run grades, and the stocks are large. But prices for fuel oil seem to be pretty firmly held and buyers state the range continues of 75 to 80 cents with the 24-26 with one-half of 1 per cent sulphur being held at 77¼ to 82½ cents. Smackover is moving steadily and the prices are practically the same as for Group 3 refinery fuel oil.

The gas oil market is quiet and prices are steady and unchanged right now. There has been talk of some decline but the price range is rather firmly held. The demand should improve shortly as the consumption is larger in cold weather.

Road oil is practically through for the season. Late buyers can fill their wants at around $1 a barrel for the 50-56 grade but the demand is very limited and the supply about cleaned out.

Lubricants Drag

Lubricating oil is still dragging along and the keen competition makes the price range uneven. There is much complaint among the refiners and sellers of lubricating oils of the way price lists are being cut. One Chicago manager stated pron-

(Continued on Page 96)

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GASOLINE CONTINUES WEAK IN EAST AND FURTHER REDUCTIONS EXPECTED

By N. O. Fanning

NEW YORK, August 2.—Gasoline continues to be weak in the Eastern territory and further reductions in prices are anticipated in view of the latest Mid-Continent crude oil cut. Large refiners who were moving gasoline rapidly a week or so ago now report that, while consumption is satisfactory and is greatly increased over last year, stocks are not being drawn on to the extent anticipated —or rather, that the accumulation of storage gasoline over the early season has proved a heavy influence on the market.

Prior to the last general reduction in crude oil prices, one of the influences in the local market so far as the jobber and spot trade were concerned was the uncertainty as to the immediate trend of crude. It was considered that a reduction was only a matter of time and now that it is out of the way there is some disposition to look for still another cut before the bottom has been reached. Further pressure on gasoline prices, revealing the weakened position of sellers who are anxious to reduce their stocks and which will probably be reflected in curtailed buying of crude on the part of larger refiners, will have the tendency to weaken, in turn, the crude price structure.

Gasoline in tank cars is being quoted at 10¾ cents at refinery, Bayonne, against 14 cents prevailing early in July. Isolated lots are being offered slightly under this price and it is reported that a few cars have changed hands at 10½ cents. Tank wagon prices show a considerable variation in different communities, but the differing prices are particularly apparent in the price to the consumer. In the New York and New England district the tank wagon price ranges from 13 cents to 19 cents a gallon, with an increasing quantity of distress gasoline in the market.

Export Condition

Export gasoline and naphthas were reduced from ¾ cents to 1½ cents a gallon, but this was rather an alignment in view of the weak domestic market than an adjustment forced by weak foreign demand. Those in close touch with the market state that while the export trade in gasoline is nothing to brag about shipments are regular and the market is fairly active. No pronounced weakness has developed and things have been going on about steadily for the last six months. There is plenty of room for improvement but the market can not be termed stagnant. In the spot export trade the individual orders are plentiful but aggregate quantity is lacking. Some of the big buyers are waiting for developments, but it is expected that the recent reduction, if it is followed by more stable conditions in the industry generally, will find them ready to buy.

Kerosene is dull and generally weak. Purchasing is on a hand to mouth basis, with big buyers not inclined to purchase ahead. While in some quarters a reduction in export kerosene prices is looked for, in others the market is quoted as firm with little possibility of change in the prices that have prevailed since last April. The movement abroad is steady.

Fuel and Gas Oils

The market for fuel oil remains unchanged over the week. The situation is described as practically in a balance with possibly a slight shading of prices at Marcus Hook compared with New York and Bayonne. Fuel oil, from all that can be learned, is neither weak nor strong. Large refiners report stocks still low and that a slightly better inquiry would definitely put the market in better shape, without, however, bringing out any disposition to quote higher prices. Practically the same situation prevails in gas oil, stocks also being low but demand unsatisfactory. Gas oil, delivered in New York, has been shaded down from 6½ cents a gallon to 6 cents.

Lubricating oils are soft, with a slight reduction in prices to jobbers noted. In this case, overproduction is causing the weakness and it is doubted whether much better conditions can prevail until the fall. The disposition is for refiners to let up as much as possible on production and to get in better shape as regards stocks for fall commitments. Wax is pretty well sold up and prices are firm.

CHICAGO GASOLINE ACTIVE AND FIRM

(Continued from Page 94)

ent price lists were just a subject of conversation not to sell by. The demand has been quite large in actual volume but it has come in dribs and the effort to secure an order shows how keenly the sellers want business. Railroad business is improving which will mean a larger consumption of suitable lubs but otherwise there is no early change in the demand in light.

Tank Wagon Changes

Tank wagon changes have been numerous the past week and cover pretty much the entire territory east of the Rockies. The change announced by the Standard Oil Co. (Indiana) effective Wednesday morning, July 30, was 1 cent a gallon on gasoline at the tank wagon and filling station and 1 cent a gallon on kerosene at all points where the prices had not been previously reduced. This makes a 2-cent decline from the prices announced by that company on February 5 and, according to the Standard's department in charge of prices, at any point where the tank wagon has declined 2 cents or more there is no change in the prices but where the change has been less than 2 cents on gasoline the decline is the difference between the amount of the previous change made and 2 cents a gallon. In Chicago the quantity price declined 1 cent making the local price list: Filling stations 18 cents, tank wagon price which applies to less than 100 gallons at one delivery 16 cents; quantity price applying to all deliveries of 100 gallons or more 14¾ cents. Kerosene, tank wagon, 11 cents.

Each of the changes made in July in the tank wagon prices followed a decline its tank wagon prices as the cost of the crude decreases, 1 cent in refined products for each 25 cents per barrel. The trade here is practically unanimous in expecting a decline of 25 cents. Should these declines take place and the tank wagon follow, the latter price in Chicago would be 14 cents for gasoline, which is where the year began.

COASTAL QUOTATIONS SHOW LITTLE CHANGE

HOUSTON, Tex., Aug. 4.—Refined oil prices wobbled but little the week ended August 2, probably because they had skidded enough following the cuts made in crude oil prices mid-July, when an average cut of 2 cents a gallon toppled the lub price structure. Low viscosity pale filtered dropped around a half cent under the previous week's quotations, due wholly to a final adjustment to conform with crude cuts. On the contrary the high viscosity pale filtered showed a full cent increase, due to increasing demand for high voscosity oils.

Inquiries and orders for domestic trade are about the same as last week. One refiner predicts the demand will get better. Still another refiner boldly declares that so far as his company is concerned, July business was better than it had been for some time.

The Gulf Refining Co., marketer of the new ethyl gas in this territory, reports it has not been able to turn it out in sufficient quantity to satisfy the demand. It markets it only through its own filling stations. It retails at 3 cents higher than straight gasoline, the quotations being, gasoline, 17 and 20 cents; ethyl gas, 20 and 23 cents.

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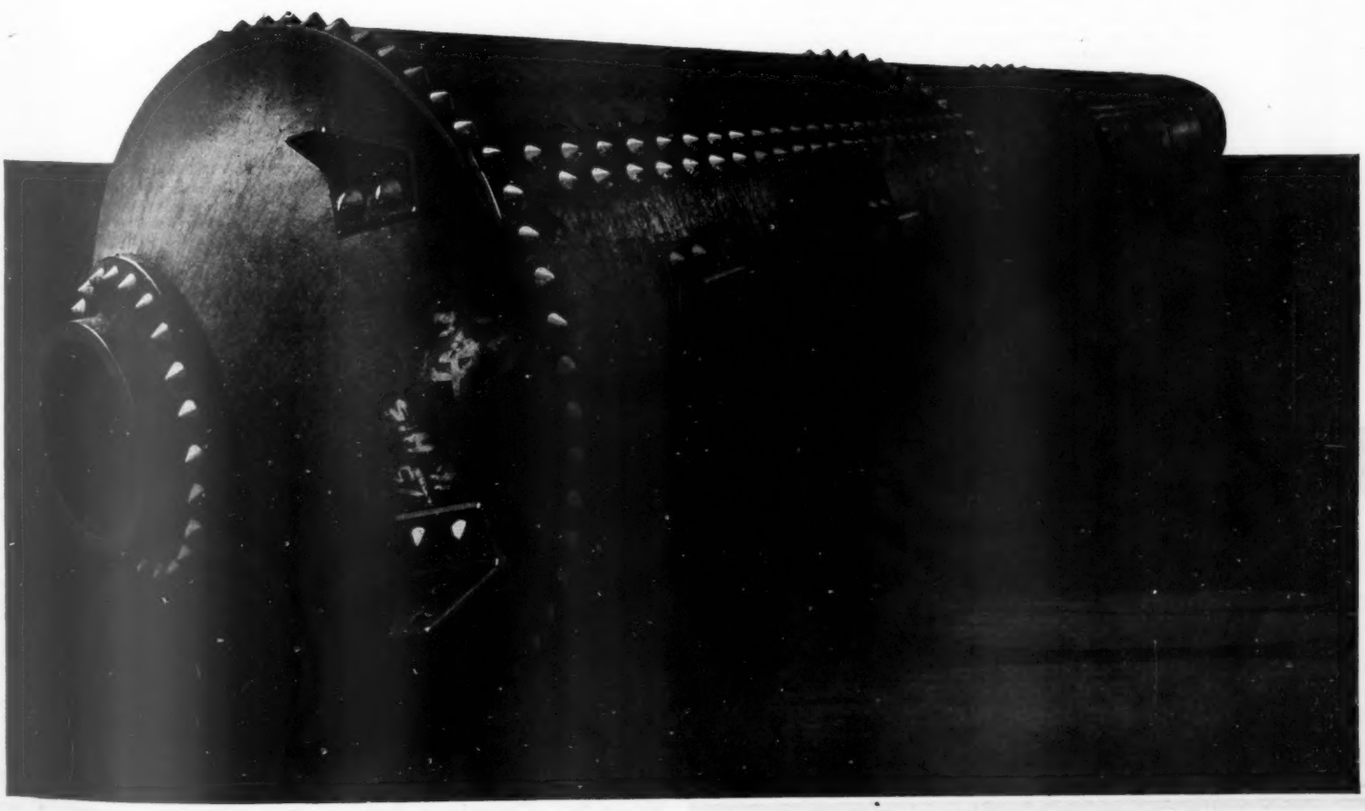

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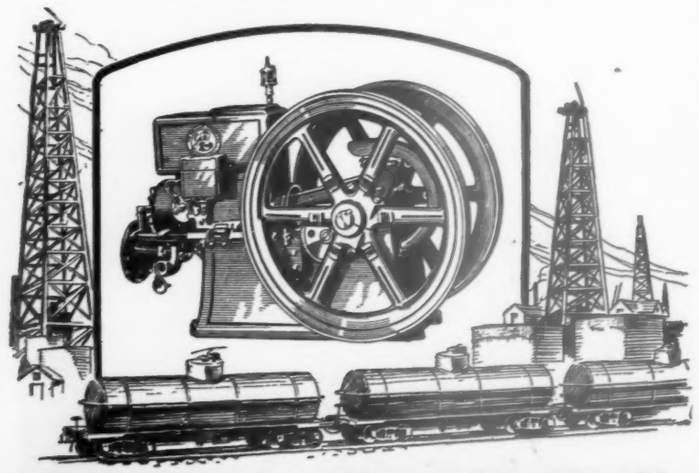

HERCULES ENGINES

CALIFORNIA FIELDS

(Continued from Page 56)

nearly half water, from 2,773 feet. The Standard Oil Co. only had fair success with well No. 1-A on lease C. A pumping test showed the well to be capable of making 30 bbls. of fluid, 20 bbls. of which was oil and 10 bbls. water. It was drilled to 4,752 feet and finished with a 4½-inch oil string. The White Behr Oil Co. finished the only good well and secured a 125-bbl. pumper by cleaning out No. 5 Cooper. The bottom of the hole is 4,773 feet but after being redrilled and cleaned out to 4,525 feet the well produced 25.8 gravity oil which cut only 3 per cent. With the exception of these completions, most of the work consists of redrills and clean-out jobs. The Shell Oil Co.'s No. 6 Davenport is still maintaining a good flow, 760 bbls. daily, following its completion two weeks ago. No. 1 Bolsa, the Standard's discovery well, is still the field's largest individual producer, with a daily output of 900 bbls. This well, finished at the comparatively shallow depth of 2,549 feet, has been a consistent producer and has caused practically no trouble since its initial completion. The Standard bailed No. 1-A Orange County Title, drilled to 5,510 feet, but neither this well nor No. 2 Geisler, finished at 4,441 feet, has so far resulted in production.

Dominguez

The Union Oil Co. completed the only new well put on production in the Dominguez Field during the past week, although the Shell Oil Co. would have equaled the Union's record had not water trouble developed in No. 1 Childs. The latter well, which is in the extreme eastern part of the district, flowed for a few hours at the rate of 1,200 bbls. a day but water broke in and it was killed in order that the source of the water trouble may be located. No. 1 Childs was drilled to 4,288 feet and finished with a 4½-inch liner carrying 388 feet of 60-mesh screen. No. 2 on the same lease is being held up because of the loss of several stands of drill pipe at 3,521 feet but the delay should be only temporary. East of the Shell's Childs property, the Marland Oil Co. is making good progress with No. 4 Dominguez and shows nearly 4,000 feet of hole. Since the two wells are only a few hundred feet apart, indications are favorble for production in the latter. If No. 4 Dominguez is successfully completed it will be the Marland's first success in California. The Union's completion was No. 5 Hellman, a 2,300-bbl. well producing clean 31.4 gravity oil. It was drilled to 4,166 feet and finished with a 6¼-inch oil string, including 375 feet of 60-mesh screen. In the northern part of the field, the General Petroleum is drilling ahead at 6,305 feet in No. 1 White, which has not shown any indications of oil. In the southwestern part of the district the Birch Oil Co.'s wildcat is drilling ahead at 3,865 feet in a brown sandy shale. Both the Shell Oil Co. and the Union Oil Co. have several holes nearing completion depths and it would not be surprising if two or three more wells were finished within a few weeks.

Rosecrans

At Rosecrans, a great many wells are approaching the interesting stage simultaneously and within 30 days development work should go a long way toward proving up the field. As conditions remain, a large part of the drilling is more or less of a wildcat nature, since the majority of the drilling is over a mile away from the field's lone producer. The several holes being drilled near the Union's flowing well, No. 1 Athens, are, however, good bets. The most promising development during the week was the successful bailing of No. 1 Padelford by the Union from 3,730 feet. This well, which is in the area bothered by water, a little over a mile south of No. 1 Athens, bailed oil during a preliminary test but did not flow. The company, it is believed, will put in a liner and swab some time during the next few days. No. 1 Rosecrans is still wet and if the 4½-inch and 6¼-inch can be pulled the hole will be deepened a little and another attempt made to shut off the water. The Union is quite sure of its position and is drilling two additional holes on this lease, as well as several others in the immediate vicinity. The St. Helens Petroleum picked up an excellent showing in No. 1 Rowell at 4,110 feet and this well, which is several hundred feet south and east of the Union's No. 1 Rosecrans and the Superior's No. 1 Maxwell, makes the area in the immediate vicinity look good. The Superior Oil Co. sprung quite a surprise by bailing some good but unusual oil from No. 1 Maxwell from 4,398 feet. While no analysis has yet been made of the output, there was a very large amount of paraffin present. The gasoline content has been estimated at close to 50 per cent, with the oil running about 45 degrees A.P.I.

Around 40 Degrees

If the Rosecrans Field should prove a large producer of extra high gravity oil with a paraffin base it might result in the establishment of a differential for this field's output. The production from the Union's No. 1 Athens tests 37.3 degrees, indicating that although there is a difference of nearly 8 degrees in gravity it is possible some of the wells may produce oil around 40 degrees. The paraffin present in the sample from No. 1 Maxwell caused a good deal of comment and, while this well may produce some paraffin oil, it is not expected the field is a whole will produce this quality crude. So far no satisfactory explanation has been made of the unusual qualities present in the sample from No. 1 Maxwell. It is particularly interesting in view of the fact that a test made of the oil found in No. 1 Rosecrans, a Union Oil Co. offset, showed the oil to be approximately 26 gravity with an asphalt base. The Associated Oil Co., drilling widmay between the Union's No. 1 Athens and No. 1 Rosecrans, picked up a nice showing at 3,965 feet in No. 1 Brockley, indicating that the sand extends some distance north of the latter. It is nearly impossible to correlate the logs of the various wells in the field and, while several companies are working on the assumption that the sand found in No. 1 Athens at 4,971 feet is the same as that found in No. 1 Rosecrans at 4,041 feet, it cannot be definitely ascertained because of the limited amount of work done to date. In the northern part of the field, the Union is making good progress with No. 1 Trust and No. 2 Athens. Both wells will be carefully cored, as the former shows 3,686 feet of hole and the latter 3,683 feet. The Barnsdall Oil Co. is drilling ahead in No. 1 Rosecrans at 4,100 feet and, although several cores have been taken, no showings have been picked up. The Sentinel Oil Co.'s No. 1 Brown, northwest of the Union's No. 1 Athens, is drilling ahead at 2,810 feet in a gray sand. This well is probably one of the most important tests being drilled in the field as it will have a direct bearing on future development work north of the only producer in the field at present. Two new operators entered the field during the week, E. J. Miley and the Pacific Petroleum Corp. Miley is erecting a rig in the northwest area, while the Pacific has taken over Morrison's No. 1 Swesey in the southern part of the district at 4,370 feet. It is understood Morrison was reluctant to spend any further money on the venture and negotiated for the well's completion on a percentage basis. The Petrolem Midway spudded in No. 1 Decommon in the northwestern part of the field and will carry the test down to the 5,000-foot level if necessary.

In the Coyote Field the Standard has reached 2,655 feet in No. 100 Murphy and secured a light showing of oil in No. 39 Emery at 3,000 feet. The showing in the latter, however, was not sufficient to warrant a test and drilling has been resumed. A core

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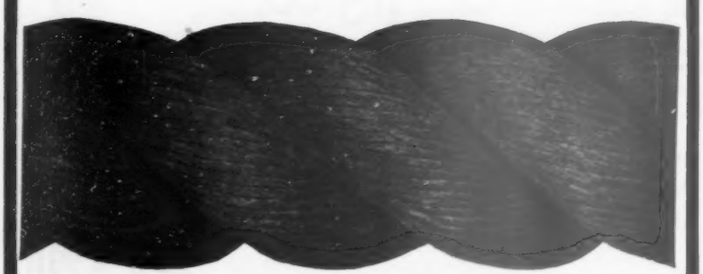
Williamsport Wire Rope Company—Oklahoma, Kansas, Arkansas and Wyoming

Pure Manila Bull Ropes



Worthy of Trust

taken at 4,923 feet revealed a good showing of oil in the O'Donnell Refining Co.'s No. 2 Strong at Rideout Heights in the Whittier Field and this well, which has been the cause of some anxiety since it is several hundred feet deeper than the discovery well of the deep sand, looks a little more promising. A string of 4¼-inch will be run in and cemented at about 4,500 feet. A production test will probably be made next week. Progress has been unusually slow during the past few weeks in all the other wells drilling in this section, due to cement jobs and fishing trouble. The Associated's No. 1 Gregg, Pan American's No. 1 Jesurun, Taylor California Royalties' No. 1 and the Petroleum Midway's No. 1 White are all held up because of fishing jobs or pipe trouble. A shut off has apparently not been secured in the latter's No. 1 Pellisier at 3,961 feet and No. 1 Hamburg is still standing cemented at 3,956 feet. The company's only active drilling well, No. 1 Seward, shows 3,720 feet of hole.

The Union Oil Co.'s No. 7 Hole created a good deal of excitement in the Coyote Field during the week by registering an initial flow of 915 bbls., while preparations were being made to put it on the pump. No. 7 Hole, drilled seven years ago, has since been only a small pumper from the 3,000-foot level. When it was first drilled, the crew noticed a showing around 2,400 feet, but it was not considered at that time as worthy of a test and the hole was carried down to 3,000 feet. Several weeks ago the well stopped pumping and it was decided to plug back from 3,000 feet to 2,498 feet and test out this upper showing. Only a small pumper was anticipated and the large initial output of this well, which is approximately 500 feet shallower than any producer on the lease, was somewhat of a surprise. The action of this well is interesting in view of the fact that no showing was found at the 2,500-level in No. 8 on the same lease. For this reason it is not known just how large this sand is since all the wells were drilled before the advent of the core barrel. No. 7 Hole, started in February, 1916, and finished in October, 1917, registered upon its completion an initial output of 200 bbls.

Drilling at Anaheim

The Standard Oil Co. has reached a depth of 5,550 feet in its No. 1 Wagner at Anaheim, while the Marland Oil Co. is drilling ahead in its second hole at 1,100 feet, after losing the first attempt because of an unsuccessful fishing job. The Wilshire Oil Co., after drilling one dry hole at Bandini, has started a second test and made 500 feet in two days of drilling. The Oakridge Oil Co.'s four wildcats, a few miles away, are still drilling, although both No. 1 Gage and No. 1 K. B. are deeper than No. 1 Rossi, which is reported to have had a showing at 4,730 feet. A water shutoff has not yet been secured in No. 1 Rossi, although it has been cemented seven or eight times. The Shell Oil Co.'s Bell test, No. 1 Loomis, is drilling in a hard sand at 4,000 feet and, although several slight showings have been noted, none of them were sufficient to result in production. The Associated Oil Co., after carrying No. 1 Casserini, formerly the 57 Petroleum Co.'s test, down to 4,836 feet, has decided that further drilling would be useless and has filed notice of abandonment. The withdrawal of the Associated from this area leaves only the Mohawk Oil & Gas Co. to continue further work. The Mohawk has a test well down 1,637 feet but is experiencing some water trouble and it is quite doubtful if the company will make any conclusive test.

Reports from El Segundo, where the Pan American and Shell Oil Companies are wildcatting, were not favorable for the development of production. The Pan American shows 4,450 feet of hole in No. 1 Pacific Southwest and the Shell 4,568 feet in No. 1 McCray. The Standard Oil Co. succeeded in bailing about 10 bbls. of oil from well No. 1 at 1,008 feet on L. A. Investment Lease No. 2 in the Inglewood district and, while the well has not been put on the beam, it may be possible to secure a small pumper. No showings have been found in the company's deep tests nearby, No. 1 Farrel at 4,407 feet and No. 1 Potter-Smith at 3,481 feet. The only active operator at La Mirada, the Associated Oil Co., made good footage during the week and shows 2,455 feet of hole in No. 1 McNally. The Petroleum Midway (California Petroleum) is abandoning its Norwalk test, No. 1 Neal, at 5,500 feet in a sandy shale. The well has at no time shown any indications of oil or gas.

Ventura Field

In the Ventura Field, the Associated Oil Co. completed No. 12 Lloyd at 4,003 feet and secured a 1,100-bbl. well. The oil, which is clean and tests 20.2 degrees, is flowing through a ⅞-inch bean under a pressure of 510 pounds. The Ring Petroleum stopped drilling No. 1 Converse in the South Mountain district at Ventura and will attempt to put it on the beam. The sand picked up at 3,000 feet continued to 3,000 feet and the company expects to secure at least a 100-bbl. well.

There has been no unusual change in the amount of drilling being done in the Coalinga Field and, with the exception of the Boychester Oil Co.'s well No. 1 on Section 18-21-15, there was little work of interest done. The Boychester's well was completed at 3,029 feet and, while it is still making considerable water, it may eventually be good for 25 or 30 bbls. The Confidence Oil Co.'s well No. 8, a recent completion on Section 31-19-15, is doing nicely and making about 20 bbls. a day. The company expects to clean out No. 5 and possibly deepen it a little in an effort to increase production. On Section 12-20-14, the Ward Oil Co. shows 285 feet of hole in No. 11, while the Salvia Oil Co., on Section 14-20-14, is drilling ahead in No. 10 at 420 feet and has erected a new rig for No. 11. The Inca Oil Co. cleaned out its well No. 10 on Section 24-20-14 and has returned it to production doing about 10 bbls. a day. The Netherlands Oil Co., on Section 26-20-14, is drilling ahead in No. 6 at 390 feet, while the Premier Oil Co.'s No. 25, on Section 24-20-14, is standing cemented at 1,079 feet. It is reported that the Marland Oil Co. has taken over the Snowolene Oil Co.'s Jacolitas Dome well and will carry it down. In the Maricopa Flats, the Transport Oil Co.'s No. 1 Bush sanded up during the early part of the week after flowing steadily for nearly a year. The amount of water produced with the oil has been increasing for some time and for this reason it is not known just what the company will do toward placing No. 1 Bush back on production. It is believed, however, that the well will be cleaned out some time during the next few weeks and an effort made to return it as a flowing well. E. G. Lewis has suspended operations on both his No. 6 and No. 7, pending further developments. In the Elk Hills Feld, the Union Oil Co. is drilling ahead in well No. 6 at 3,300 feet, while the Associated is cleaning out No. 31 at 3,206 feet. The Elk Hills Development Co. is putting well No. 1 on a production test at 2,865 feet but so far the results have been unsatisfactory.

Field Operations

Oil field operations reported to the State Oil and Gas Supervisor show 22 new wells started, compared with 44 during the previous week, a total for the current year to date of 903, compared with 864 at the same time last year. Of the 22 notices to drill fieled this week, 5 were for wells in the Torrance Field, 2 in the Long Beach Field, 1 each in Huntington Beach, Dominguez and Montebello Fields, 5 in the fields of Ventura County and 7 in the fields of Kern County. There were 35 tests for water shut off, compared with 31 during the previous week. Deepening or redrilling jobs totaled 27, there being 20 during the preceding week. Abandonments totaled

The Driller's Right Hand Man

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You will never know the value of your rotary equipment until it is hooked up to a TITUSVILLE 10½x10 Twin.

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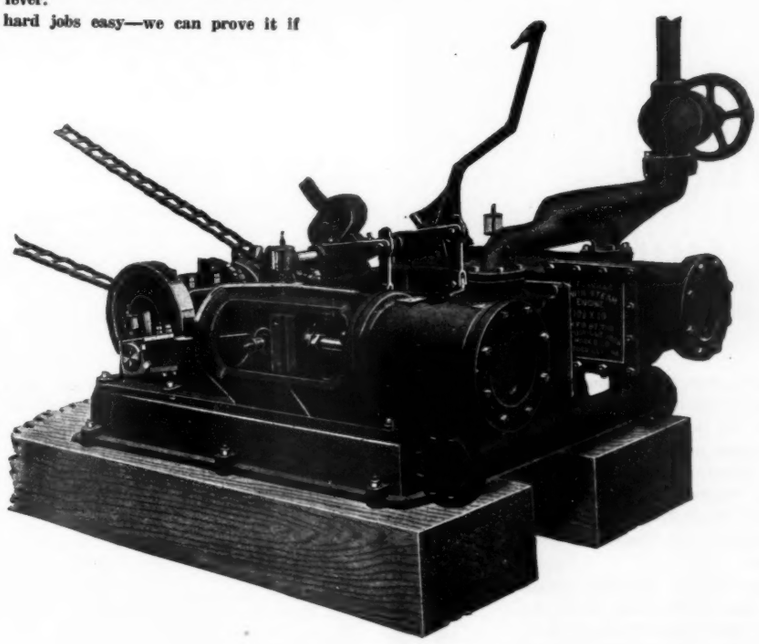
Its a drilling engine that makes the hard jobs easy—we can prove it if you will give us an opportunity.



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TITUSVILLE ~ PENNA.

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Twin Drilling Engines
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Swivels Slush Pumps
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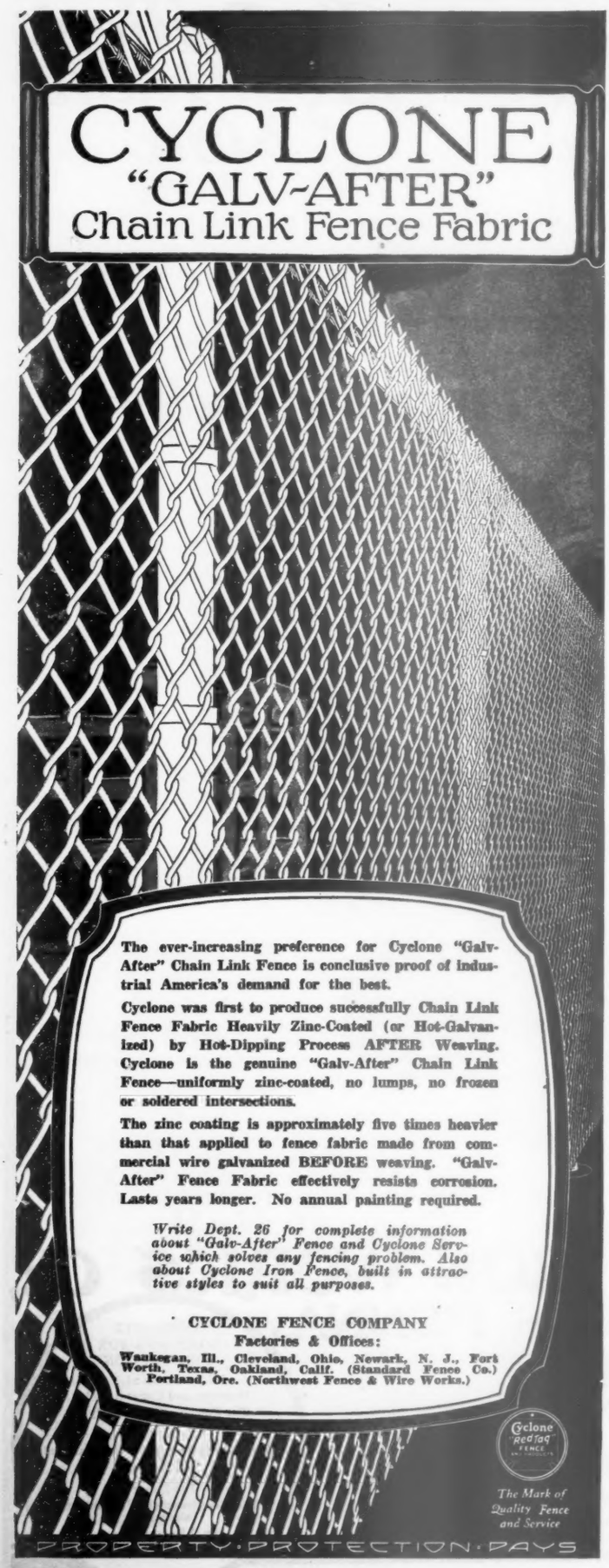
For Mid-Continent, Eastern, Western and Coastal Fields:
The Continental Supply Co.

For California:
The Republic Supply Company of California

For Export:
The Continental Well Supply Company,
No. 2 Rector Street,
N. Y. City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"GALV-AFTER"
Chain Link Fence Fabric
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Cyclone was first to produce successfully Chain Link Fence Fabric Heavily Zinc-Coated (or Hot-Galvanized) by Hot-Dipping Process AFTER Weaving. Cyclone is the genuine "Galv-After" Chain Link Fence—uniformly zinc-coated, no lumps, no frozen or soldered intersections.
The zinc coating is approximately five times heavier than that applied to fence fabric made from commercial wire galvanized BEFORE weaving. "Galv-After" Fence Fabric effectively resists corrosion. Lasts years longer. No annual painting required.
Write Dept. 26 for complete information about "Galv-After" Fence and Cyclone Service which solves any fencing problem. Also about Cyclone Iron Fence, built in attractive styles to suit all purposes.
CYCLONE FENCE COMPANY
Factories & Offices:
Waukegan, Ill., Cleveland, Ohio, Newark, N. J., Fort Worth, Texas, Oakland, Calif. (Standard Fence Co.) Portland, Ore. (Northwest Fence & Wire Works.)
Cyclone Red Tag Fence
The Mark of Quality Fence and Service
PROPERTY·PROTECTION·PAYS

4, 2 being in the Long Beach Field, 1 in Dominguez Field and 1 at Ventura. Permits were issued for the following new wells:

Torrance

Location, Company, Well—
General Pet. Corp.—
8-4-14 Carson 4.
Petroleum Securities Co.—
24-4-14 Kielnmeyer 17-A.
Standard Oil Co.—
14-4-14 Carson 1.
24-4-14 Joughin 9.
15-4-14 Marble Fee 20.

Long Beach

Pan-American Pet. Co.—
29-4-12 Pyle-Coffin 1.
Shell Co.—
29-4-12 Coseboom 7.

Huntington Beach

Standard Oil Co.—
34-5-11 Jones Comm. 4.

Dominguez

Shell Co.—
34-3-13 Reyes 12.

Midway-Sunset

35-31-22 Associated Oil Co. 32.
Barnsdall Oil Co.—
17-11-23 Hazelton 1.
29-31-24 Pacific O.l Co. 10.
19-31-24 Pacific Oil Co. 11.
2-11-24 Ruby Oil Co. 11.
28-31-24 Southwest Pet. Co. 2.

GULF COAST

(Continued from Page 52)

No. 81 Hogg is flowing 400 bbls. on air at 2,835 feet, 40 per cent water. No. 80 Hogg is drilling in at 2,450 feet, 400 feet east from No. 81. Company's No. 11 Abrams is flowing 800 bbls. on air at 2,850 feet. It made as high as 1,100 bbls. for several days. These are on the north side of the dome. On the northwest, the Humble Oil & Refining Co.'s No. 2 Badge is at 4,108 feet and No. 9 Tyndale-Wyoming around 2,800 feet. On the northeast, the Gulf Production Co.'s No. 6 Tom Hogg is drilling at 2,155 feet. The Sun Oil Co.'s No. 3 Robertson on the south side is deepening at 3.166 feet.

At Damon Mound, the Humble Oil & Refining Co. is working over an old well on the Gallagher and the Sinclair Oil & Gas Co. has one rig going on the southwest side of the dome.

Other Pools

At Spindletop, the Gulf Production Co.'s No. 207 Gladys is bailing at 850 feet and John Wynne's No. 1 Sunshine is bailing also at 910 feet.

The deep test of the Rycade Petroleum Corp. is drilling below 3,445 feet. It is one the Gladys tract.

Rich & Maxidiam junked and abandoned No. 1 Ahlers at Big Creek at 3,800 feet.

In the Markham Pool, the Rycade Co.'s No. 1 Sisk is fishing for the drill stem, stuck at 2,550 feet and its No. 2 Meyers is drilling around 2,925 feet.

At Barber Hill, Chambers County, the Kirby Petroleum Co. & Mills Bennett's No. 1 McKinney joint, is in hard sand rock at 2,810 feet. The Texas and Kirby Co.'s No. 1 joint, 1 mile east of the dome is drilling at 1,100 feet.

At High Island in Galvston County, the Gulf Production Co.'s No. 1 Smith is around 1,565 feet. The Sun Oil Co.'s Nos. 3 and 7 Cade are drilling. The Patton Oil Co. has rigged No. 1 Gordon and the Yount-Lee Oil Co. No. 3 Guidry.

At Hockley Dome in Harris County, the Texas Exploration Co.'s No. 17 Warren on the north side, is sidetracking at 2,900 feet and No. 19 is around 375 feet.

At Stratton Ridge in Brazoria County, the Sinclair Oil & Gas Co.'s No. 1 Perry is drilling around 1,534 feet. It is on the south side of the dome.

South Louisiana

In the Edgerly Pool, Evans & Stovall's No. 2 Wilson is bailing at 2,810 feet, after setting liner. G. W. Gray is working over No. 13 Lilliard.

In the Jennings Pool, the Caladia Production Co.'s No. 41 S. F. S. is drilling around 2,100 feet. The Gulf Refining Co.'s No. 41 S. F. S. is drilling around 2,100 feet. The Gulf Refining Co.'s No. 34 Jennings-Clement is at 1,875 feet. The Texas Co.'s No. 43 Latriello is deepening at 1,685 feet. O. Absher's No. 1 S. F. S. is at 870 feet. R. N. Hines is working over No. 2 Martin and W. H. Harden No. 5 Aranaudlet.

In the Vinton Pool, the Gulf Refining Co.'s No. 32 Star will pump at 2,250 feet. Same company's Nos. 33 and 50 G. N. G. bailed dry at 3,000 and 2,450 feet respectively and have been temporarily abandoned. The Texas Co. got a duster in No. 25 Gray at 2,156 feet.

The Gulf Refining Co.'s No. 2 Gray is at 2,145 feet. No. 60 G. N. G. is drilling at 910 feet. Wilson & Tucker's No. 2 Parks is drilling at 1,865 feet. The Vinton Petroleum Co.'s No. 8 Gray is at 1,700 feet and No. 3 Rescue around 800 feet. The Just Oil & Refining Co.'s No. 1 Weeks is at 1,390 feet and No. 1 Lyons sidetracking. The Texas Co. has rigged No. 1-A Gray. Marrs McLean is sidetracking No. 5 Gray. The Edgerly Petroleum Co.'s No. 1 Gray is at 1,320 feet.

A number of locations made in the various pools previous to the recent reductions in credit balance prices have been abandoned for the present.

The Vacuum Oil Co.'s No. 1 Miller, 4 miles north of Lake Charles, La., is reported showing oil and gas in a sand below 2,900 feet. It is the seventh test drilled in that section by the company.

Laredo Districts

The Cole Petroleum Co.'s burning gas well, near Bruni, Webb County, has been turned over to the Border Gas Co. Another effort will be made to extinguish the flames. In the Aviator district, the Associated Oil Co.'s No. 10 is rated at 100 bbls. at 1,690 feet. That company has increased the number of producers on the acreage it took over from the Black Panther Oil Co. from five to ten. Late last week Allsworth Brothers Co. No. 3 in the Schott Pool came in at 1,710 feet making 100 bbls. Casing has been set in No. 4. The Poor Boy Oil Co.'s No. 1 is making 100 bbls. at 1,710 feet. In the Los-Ojulas district, Wheatley and others' No. 10 is rated at 150 bbls. at 1,670 feet. The Rydal Oil Co.'s No. 2 in the Aviator Pool came in with an initial output of 100 bbls. at 1,650 feet and the Alonzo Oil Co.'s No. 5 is credited with 100 bbls. initially at 1,710 feet.

Chandler & Grear set casing in No. 4 Oachoa pasture at 1,765 feet and in No. 7 at 1,760 feet. The Caroline-Texas Co.'s No. 1 Benevadis is taking a core at 2,975 feet. The Hobo Oil Co.'s No. 1 Garcia is shut down at 1,450 feet. The Carnahan P. & R. Co.'s No. 18 is drilling below 1,200 feet. The Boyd Oil Co.'s No. 1 Petty in the northern part of Webb County is drilling below 2,800 feet. The Cole Petroleum Co. has a derrick up for No. 5, near Bruni.

Somerset Field

Boysen and others' No. 5 in the southeast part of the Somerset Field is pumping and flowing 75 bbls. per day. Ballard & Underwood are preparing to drill three deep tests on the Atacosa County side of the field. Some years ago a deep test was drilled to 2,800 feet getting the Edwards lime, but is was barren. Early this year Kuntz & Thompson drilled a deep test east of production in Atacosa County, getting sulphur water.

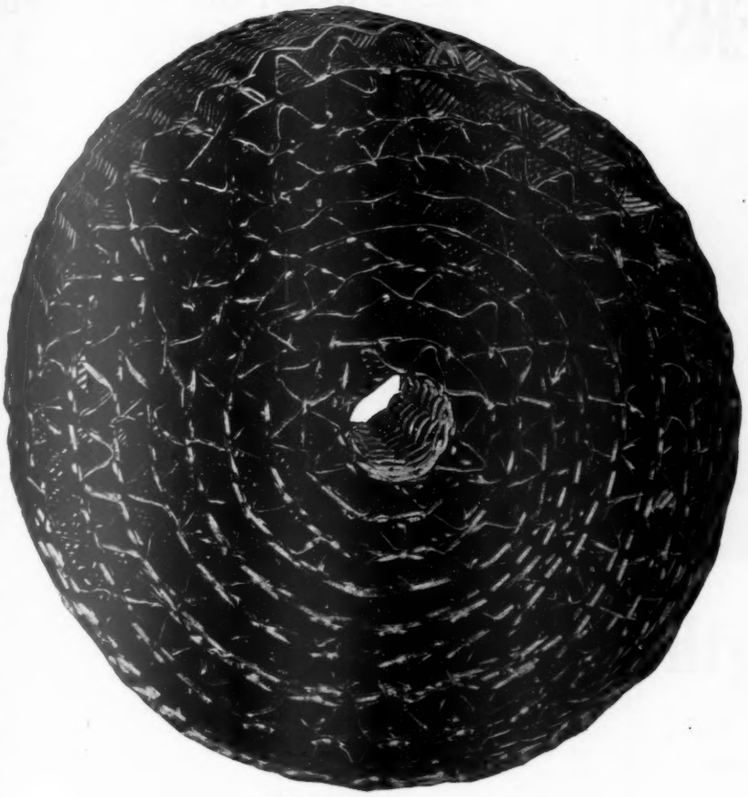
The Grayburg Oil & Refining Co., with a line to its refinery in San Antonio, posted the following prices for Somerset crude, effective July 28: 28 gravity, 90 cents; 28, 30.9 gravity, $1.31; 31, 32.9 gravity, $1.10; 33 gravity and above, $1.25. The bulk of the production is above 33. The flowing well mentioned is above 42 gravity. The field men strain it through a chamois skin and use it in Ford cars.

Luling Field

The United North & South Oil Co. drilled in No. 5 A. Mercer on the Caldwell County side of the Luling Field, getting a 500-bbl. well. Both the Magnolia Petroleum Co. and the Grayburg Oil & Refining Co. cut Luling crude 10 cents, from $1 to 90 cents, effective July 26. The Magnolia Co. has started the first batch of oil through its 8-inch line to Magpetco, near Beaumont. Only about 10,000 bbls. per day will be handled at present, pending the completion of the pumping station at Aldine, north of Houston.

The Magnolia Co.'s skimming plant and the portable refinery of the Mutual Oil Co. at Oilton, on the railroad, are both shut down. The United North & South Oil Co. is planning to lay 4 miles of line and install a pump of 20,000 bbls. per day capacity as a preliminary to the consolidation of its treating plants into one and changing over from the present method to another system.

(Continued on Page 123)



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FOSTER BAFFLE

FOR ABSORPTION GASOLINE PLANTS

Retaining the efficiency and positive action of the corrugated sheet baffle but fabricated from metal lath to meet the demand for a baffle porous in all directions.

DEAN E. FOSTER & COMPANY

Consulting, Manufacturing & Operating Engineers
Specializing in Natural Gasoline Plants

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Tulsa, Oklahoma

58

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BOX-PIN-STEEL-SLIP-STEEL

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SPECIAL-HIGH-GRADE

SPECIAL ALLOY STEEL

FORGING-BILLETS

QUALITY and SERVICE

Manufactured By

ANDREWS STEEL CO.

NEWPORT, KY.

F & T STEAM BOILERS

Bulldogs for Strength

A Model for Every Oil Country Need, Built to Conform to the Laws of Your State

You will find in Farrar & Trefts Steam Boilers the reserve strength that strenuous oil-country conditions demand.

It is strength sufficient to buck up against not only ordinary conditions but emergencies, too—and it is in emergencies that a boiler is called on to show its real mettle.

Sixty years' experience is back of F&Ts, and if the verdict of the fellows who run them is any indication, it is evident in every detail.

We are the West-of-the-Mississippi headquarters for oil country boilers. Phone, write or wire for full details of F&Ts.

D. F. CONNOLLY AGENCY, Inc.
623-24 Kennedy Bldg., TULSA, OKLA.

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Long Distance 193

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Los Angeles, Calif.—Hillman-Cooney, Inc., 1011-12 Wright Callender Bldg.
Casper, Wyoming—Northwestern Supply Company
Beaumont, Texas—Brooks Supply Company
El Dorado, Kansas—Oil Field Specialties Supply Co.
Fort Worth, Texas—Longhart Supply Company, 608 First National Bank Bldg.
Wewoka, Oklahoma—Colonial Supply Company.
Louisiana, Arkansas and Houston, Texas—Petroleum Supply Co.

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HOW ONE COMPANY IS PRESENTING FACTS ABOUT OIL TO THE PUBLIC

By L. M. Fanning

Of interest in connection with the oil industry's realization of the necessity of presenting facts to the public, is the current advertising of the Standard Oil Co. (New Jersey). Appearing regularly in newspapers throughout the company's territory, that is, New Jersey, Maryland, Virginia, West Virginia, North Carolina, South Carolina, and the District of Columbia, are advertisements designed to tell such facts to the motoring public, with their keynote service, both as regards the functioning of the industry and the company selling the product. One series now being presented might be termed directly educative. This covers industry facts, and is also institutional. The other series, which is the regular summer "tour" advertising, includes this year pertinent facts and comments regarding the industry in general. Much of the industry material used in these series was originally published by The Oil and Gas Journal and is contained in The Journal's "The Oil Industry's Answer." Drawings and charts from The Oil and Gas Journal are also used.

"If Gasoline Were Sold by Weight" is the title of one of the advertisements of the educational series. A drawing shows gasoline at 3½ cents a pound compared with bread at 8 cents, milk at 8 cents and sugar at 10 cents. The text advises that to supply 15,000,000 motorists with fuel is no easy matter, and points out the necessity of finding new oil fields, the hazards, the cost, the transportation facilities necessary, the fact that "gasoline must be unscrambled from all the other products in the crude," the investment, and finally that the industry is so thoroughly organized that gasoline can be sold around 3½ cents a pound. The institutional features of the "ad" regards the service rendered the motorist by the company, pointing to the company's installation of road markers and danger signs, and its service stations and dealers.

Oil Smallest Expense

"Oil—Your Smallest Expense" is the theme of another of these advertisements, which makes use of the table published in The Oil and Gas Journal, showing the average cost of driving 5,000 miles a year. Without lubricating oil cars would stop running tomorrow, the copy advises, and points out the investment in various departments of oil endeavor and the billion dollars a year spent by the industry for supplies, needed to put high grade oils and fuels, at reasonable prices, at the beck and call of the country. As a result, America lubricates her cars at 1-5-cent per mile, says, the "ad," and finishes up with comment on the company's research and vigilance in connection with its lubricating oil.

Another of this series is headed "Gasoline, Cheapest of All Commodities," presentng a drawng giving 10-year average price level on gasoline and other commodities, and calling attention to the fact that while other staples, for which the demand is more or less constant, soared to 70, 80 or even 100 per cent above their pre-war levels, gasoline has only averaged an increase of 25 per cent and has often sold below its 1913 price. This "ad" then points out that the company has kept pace with the demand for gasoline, and kept prices below that of any other general commodity in spite of the distance the crude oil must be brought and the large area of distribution.

"Lure of Gusher"

"The Lure of the Gusher," as another "ad" of this series is called, contrasts the talk of the glib salesman of oil stocks with the hard fact that the lure of the gusher has cost many a man his hard-earned fortune. The oil industry of America, it says, is built on a less spectacular but more solid foundation. "A Difficult Problem in Transportation" is treated in another "ad" which relates that the production, refining and distribution of oil products is an industrial feat of which the country may well be proud.

"How the Oil Industry Helps Prosperity" is brought out in one of the "ads" which reproduces The Oil and Gas Journal's graphic drawing showing the number of wells drilled and the cost in 1883, 1903 and 1923. Six hundred refineries give employment to many thousands of men in every line of business, it is pointed out. The transportation of the crude oil and the refined products is an immense enterprise in itself. The distribution of gasoline, kerosene, oils and greases gives a livelihood to over 50,000 retail dealers. Finally, this country exported in 1923, $350,000,000 worth of oil products, far exceeding exports of steel, tobacco, chemicals or automobiles.

Another of these "ads" is titled "The Power Behind the Piston," this also reproducing a drawing from The Oil & Gas Journal, showing how fuel oil is rapidly supplanting coal as the nation's source of energy. The final "ad" of the educational series is headed "Second Among the Nation's Industries" and brings out such facts as the industry's contribution to other industries, that the oil industry is the biggest shipper on he railroads, that it spends $500,000,000 a year drilling new wells and as much again for supplies, building materials, machinery.

Oil and Gas Journal Facts

The "Standard" tour series of "ads" feature some point of interest, historic or otherwise, in the territory which the company serves and each "ad" constitutes an invitation by way of picture, map and text to the motorist to visit the particular place or spot described. Each of these "ads" in addition to giving interesting historical facts about the place, contains a suggestion of what the oil industry is by using material similar to that which is contained in the educational series. Each "ad" has a boxed item giving some such fact, in many cases use being made of material originally printed in The Oil and Gas Journal.

There are six tour "ads" for each of the six States covered by the Standard Oil Co. (New Jersey) which are appearing in the leading daily papers of the State. In the City of Washington, 13 "ads" will be inserted.

Describing its tour series to its employes, the company states:

"Like its service, the advertising of the Standard Oil Co. (New Jersey) cannot be wholly selfish and attain the highest degree of effectiveness. Telling the motorist where he can find both pleasure and profit is only one more expression of the fundamental idea of service which has dominated this company since it was organized and which is truly responsible for its success.

"In addition to universal distribution of universally high quality gasoline, motor oils and other lubricants throughout six States, we have aimed to make motoring easier and safer by erecting road markers and danger signs, by maintaining modern service stations and by distributing more than 1,000,000 road maps. We urge each Standard salesman, agent and tank wagon driver to do his utmost in rendering frendly service on the road, by means of reliable road information or by emergency assistance.

Of Interest to Institute

"Besides helping the tourist, these "tours" will help the communities featured and those along the route of the motorist who is inspired to travel. The 1923 series was widely commended by newspapers, chambers of commerce, civic clubs and educators. It will do no harm to call similar attention to the present series."

With the American Petroleum Institute and other organizations working on a plan for presentation of industry facts and with the subject uppermost in the minds of the industry, the methods employed by the New Jersey Company in the two series described, are well worth thoughtful study.

Telling the World the Story of Oil

Here are reduced facsimiles of some of the large display advertisements being used by the Standard Oil Company of New Jersey in the great daily newspapers of the East. It will be observed that facts and illustrations taken from "The Oil Industry's Answer" published by The Oil and Gas Journal are freely used.

How the oil industry helps prosperity

Last year 24,400 oil wells were drilled in this country. During the last ten years the average has been over 22,000 wells a year. This means an expenditure of over 500 million dollars a year, for now-a-days the average cost of drilling a well is $25,000. Some wells involve an expenditure of $50,000 to $125,000 each.

IT is customary to think only of the people who "strike oil" as profiting by it. But the oil industry plays a much bigger part than that in fostering national prosperity.

The industry is spending over $500,000,000 a year in drilling new wells. Besides the direct labor involved, this means large expenditures for pipes, cars, derricks, engines and pumps.

Six hundred refineries give employment to many thousands of men in every line of business. The transportation of the crude oil and of the refined products is an immense enterprise in itself. The distribution of gasoline, kerosene, oils and greases gives a livelihood to over 50,000 retail dealers. Finally, this country exported, in 1923, $350,000,000 worth of oil products. This far exceeds our exports of steel, tobacco, chemicals, or automobiles.

While the Standard Oil Company (New Jersey) does not drill for oil in all the states in which it distributes, it operates six refineries, giving employment to thousands of men. Its retail field contains over 10% of the nation's automobiles. So complete is the distribution of "Standard" products that no automobile in these states is ever far from a "Standard" pump.

STANDARD OIL COMPANY
(New Jersey)

"STANDARD"

"Standard" is the trade mark of the Standard Oil Co. (N. J.), registered in the U. S. and many foreign countries.

If GASOLINE were sold by weight

By weight, gasoline costs around 3½ cents a pound. Compare this with bread, milk or sugar. No other commodity goes through so many refining processes and yet sells at so low a price.

TO supply fifteen million motorists with fuel is no easy matter. New oil fields must constantly be found to take the place of the old. Four out of every five wells drilled in new territory never produce a barrel of oil. Oil must be sought one, two, five thousand feet below ground. It must be brought by pipe line, railroad or tanker, 3,000 miles or more to the refinery. Gasoline must be unscrambled from all the other products in the crude. Finally, pure, reliable fuel must be on tap at every turn in the road.

It takes a nine billion dollar investment to run the oil industry. But the industry is so thoroughly organized that gasoline can be sold around 3½ cents a pound.

As you go bowling along in your automobile you will see many evidences of the ideal of public service which underlies all the activities of the Standard Oil Company [New Jersey]. You will find "Standard" road markers and danger signs on which you can rely. You will find "Standard" service stations and dealers at most important centers. In all of these activities you will find the same efficient service and quality that you find in "Standard" Gasoline and Oils.

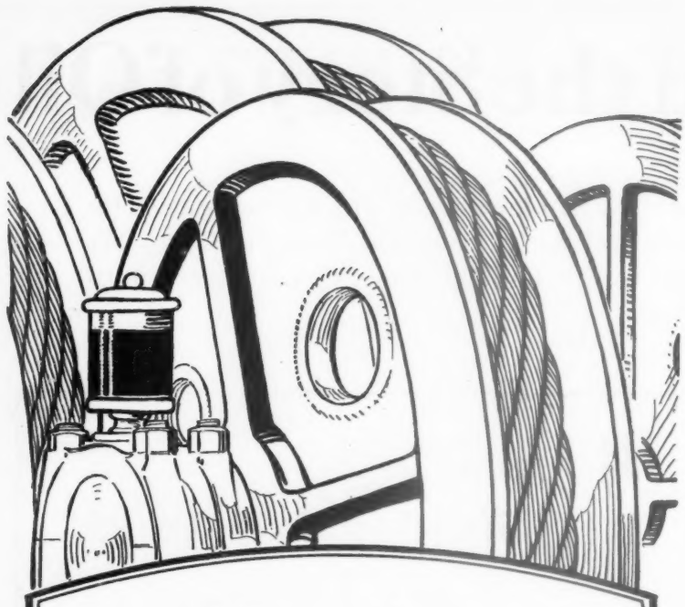
STANDARD OIL COMPANY
(New Jersey)

"STANDARD"

"Standard" is the trade mark of the Standard Oil Co. (N. J.), registered in the U. S. and many foreign countries.

STANDARD OIL COMPANY (New Jersey)
"STANDARD"
On your tour, or at home, you will find good dealers recommending "Standard" Gasoline and "Standard" Polarine Oils

STANDARD OIL COMPANY (New Jersey)
"STANDARD"
On your tour, or at home, you will find good dealers recommending "Standard" Gasoline and "Standard" Polarine Oils



When Your Casing "Freezes"

attach a Yellow Strand Rotary Casing Line and start the engine. See the line stretch. And *stretch.* And STRETCH.

Will she snap? No. She'll tug till the casing comes loose, and spring back to form like the "live wire" that she is.

This power to stretch and recover is what makes Yellow Strand supreme for working casing that sticks. Bending puts no undue strain on this extraordinary casing line. Gives you your money's worth in *results.*

Ask for Catalog K-2

BRODERICK & BASCOM ROPE CO., St Louis, Mo.
Branches: **New York and Seattle**
Factories: **St. Louis and Seattle**

© 233

Yellow Strand Rotary Casing Lines

NORTH CENTRAL TEXAS

(Continued from Page 44)

150 bbls. at 3,530 feet; Miller Brothers' No. 2 Boyett, 75 bbls. at 3,740 feet.

Drilling: Cerf and others' No. 1 Poindexter, drilling at 1,800 feet; Kellogg and others' No. 1 Sedwick, drilling in shale at 2,640 feet; Landreth Production Co.'s No. 3 Lynch, spudding; Magnolia Petroleum Co.'s No. 3 George, drilling by too's at 3,490 feet; McMahon and others' No. 2 Lynch, drilling in soft rock at 950 feet.

Palo Pinto County—Completions: Domestic Oil Co.'s No. 1 Slimp, dry at 595 feet; Cunningham and others' No. 1 Holly, dry at 610 feet; Tolbert and others' No. 1 Thornton, 1,000,000 feet of gas at 246 feet; Welch and others' No. 1 Newman, dry at 725 feet; Upham Gas Co.'s No. 1 Bradford, dry at 1,240 feet; Strawn Coal Co.'s No. 1 fee, 110 bbls. at 3,046 feet; Yukon Oil Co.'s No. 1 Slemmons, dry at 3,965 feet.

Drilling: Guarantee Royalty Co.'s No. 1 Mosley, drilling at 550 feet; Tolbert and others' No. 1 Slimp, drilling at 200 feet; Owens and Burkett's No. 2 Wheeler, fishing job at 3,050 feet; Craig and others' No. 1 Jones, drilling at 780 feet.

Callahan County—Completions: McBride and others' No. 1 Isenhower, dry at 437 feet; Sherrin and others' No. 4 Cathey, dry at 1,860 feet; Tidal Oil Co.'s No. 4 Cathey, 35 bbls. at 1,775 feet.

Drilling: Bryant and others' No. 1 Forbes, drilling with hole full of water at 1,900 feet; Dudley Oil Co.'s No. 1 Moore, promised a producer at 1,837 feet but failed, will be drilled deeper with cable tools; Dutton and others' No. 1 Carter, repairing machinery at 895 feet; No. 1 Harwell, drilling in shale at 800 feet; Pruitt and others' No. 1 Bailey, drilling at 250 feet; No. 1 Belcher, drilling at 215 feet; Poe and Wilson and others' No. 6 Albin, drilling at 1,100 feet; Texas Pacific Coal & Oil Co.'s No. 1 Biggerstaff, casing parted at 1,170 feet.

Brown County—Completions: Calbro Oil Syndicate's No. 2 Prather, 30 bbls. at 1,320 feet; Critten and others' No. 1 Fomby, dry at 2,550 feet.

Drilling: Anderson and others' No. 1 Wheeler, drilling at 1,300 feet; Avery and others' No. 1 Wheeler, drilling at 1,200 feet; No. 3 Cox, drilling in shale at 1,200 feet; Gump and others' No. 1 Moore, showing 500,000 feet of gas and drilling with hole full of water at 1,070 feet; Mahlstedt and Mook's No. 1 Gaines, drilling at 960 feet; No. 1 Gafford, drilling at 700 feet; Moore and others' No. 1 Chambers, drilling at 780 feet; Omaha Southern Oil Co.'s No. 2 Gaines, drilling at 1,700 feet; Simms Oil Co.'s No. 1 Gaines, setting 6⅝-inch casing at 1,225 feet.

Mitchell County—Drilling: Eddleman and others' No. 1 Gist, drilling at 1,140 feet; Harris and others' No. 1 Brown, drilling at 250 feet; California Co.'s No. 1 Morrison, plugging to abandon at 5,305 feet; No. 1 Miller, cleaning out and will swab at 3,030 feet; No. 10 Morrison, drilling at 2,110 feet; No. 11 Morrison, drilling at 2,765 feet; No. 6 Abrams, drilling at 1,640 feet; Sloan and others' No. 2 Miller, drilling in brown shale at 1,260 feet.

Production Report
Week Ending July 31, 1924

Burkburnett		
Barkley & Meadows	1,100	
Humble Oil & Refining Co.	540	
Gulf Production Co.	960	
Magnolia Petroleum Co.	3,215	
McMahon Oil Co.	425	
Panhandle Oil & Refining Co.	410	
Prairie Oil & Gas Co.	15	
Sinclair Oil & Gas Co.	75	
The Texas Co.	600	
Texhoma Oil & Refining Co.	465	
Miscellaneous	11,655	
Total		19,464
Electra		
Empire Gas & Fuel Co.	1,155	
Humble Oil & Refining Co.	265	
Griswold Oil Co.	210	
Gulf Production Co.	1,070	
Magnolia Petroleum Co.	4,320	
McMahon Oil Co.	210	
Panhandle Oil & Refining Co.	90	
The Texas Co.	4,425	
Texhoma Oil & Refining Co.	2,350	
Miscellaneous	6,580	
Total		20,675
Iowa Park, Etc		
Griswold Oil Co.	20	
Gulf Production Co.	35	
Humble Oil & Refining Co.	45	
Panhande Oil & Refining Co.	265	
Texhoma Oil & Refining Co.	80	
Miscellaneous	4,410	
Archer County		
Empire Gas & Fuel Co.	1,365	
Griswold Oil Co.	795	
Gulf Production Co.	330	
Humble Oil & Refining Co.	180	
Magnolia Petroleum Co.	265	
Panhandle Oil & Refining Co.	375	
Prairie Oil & Gas Co.	1,800	
The Texas Co.	500	
Texhoma Oil & Refining Co.	2,810	
Miscellaneous	20,755	
Petrolia		
Gulf Production Co.	50	
Magnolia Petroleum Co.	20	
The Texas Co.	80	
Miscellaneous	180	
Total		34,270
Stephens County		
Empire Gas & Fuel Co.	100	
Gulf Production Co.	1,655	
Humble Oil & Refin'ng Co.	1,270	
Magnolia Petroleum Co.	735	
Mid-Kansas Oil & Gas Co.	1,830	
Prairie Oil & Gas Co.	730	
Sinclair Oil & Gas Co.	265	
The Sun Co.	510	
The Texas Co.	2,190	
Texas Pacific Coal & Oil Co.	1,325	
Miscellaneous	9,765	
Total		20,365
Eastland County		
Gulf Production Co.	445	
Humble Oil & Refining Co.	100	
Magnolia Petroleum Co.	520	
Panhandle Oi & Refining Co.	400	
Prairie Oil & Gas Co.	700	
Sinclair Oil & Gas Co.	530	
The Texas Co.	400	
Texas Pacific Coal & Oil Co.	850	
Miscellaneous	3,200	
Total		7,145
Other Fields		
Strawn—		
Texas Pacific Coal & Oil Co.	300	
Miscellaneous	540	
Moran—		
Empire Gas & Fuel Co.	75	
Humble Oil & Refining Co.	550	
The Texas Co.	160	
Texhoma Oil & Refining Co.	170	
Miscellaneous	2,730	
Coleman County—		
Miscellaneous	135	
Brown County—		
Miscellaneous	500	
Comanche-Eastland—		
Humble Oil & Refining Co.	200	
Magnolia Petroleum Co.	1,070	
Prairie Oil & Gas Co.	200	
Sinclair Oil & Gas Co.	60	
The Texas Co.	250	
Texas Pacific Coal & Oil Co.	150	
Miscellaneous	4,700	
Young County—		
Gulf Production Co.	85	
Sinclair Oil & Gas Co.	490	
Panhandle Oil & Refining Co.	270	
The Texas Co.	70	
Miscellaneous	3,215	
Mitchell County	1,225	
Reagan County	2,760	
Jack County	30	
Scurry County	50	
Carson County	600	
Hutchinson County	55	
Total		20,610
Total this week		122,615
Total last week		123,409
Loss		794

ANGLO-AMERICAN OIL IN BRITISH MARKETS

(Continued from Page 40)

idly extending in England, and is now being adopted by the dealers everywhere as the most up-to-date method of distribution. Anglo-American Oil Co. was the first big company to push the sale of these pumps. Other companies rather discouraged their use preferring to stick to the old fashioned 2-gallon tin. In this respect they have been forced to change, however, and all companies are now pushing the sale of pumps to the dealers, with the result that the distributing business in gasoline is rapidly being converted from the tin to the bulk method. Some objection was raised to the pumps at first, fearing that the quality of gasoline delivered would not be up to the usual standard. Anglo-American insist that all pumps which bear their brand should also bear their guarantee label as to quality. The motorist now looks for a guarantee label on a pump as evidence of quality and pumps not so equipped stand a poor chance in competition with those selling acknowledged brands.

PRAIRIE SHIPMENTS FOR JULY

The Prairie Pipe Line Co.'s crude oil deliveries to refiners in July were 3,617,585 bbls. or an average of 116,696 bbls. per day. The June deliveries were 3,547,891 bbls. or an average of 118,263 bbls. The May deliveries averaged 118,004 bbls. In July 1923 the Prairie deliveries averaged 144,171 bbls., indicating a drop of 27,518 bbls. a day in July this year as compared with the same month last year.

GENERAL AMERICAN TANK CAR CORPORATION

Pioneers in Tank Car Service

1900———1924

QUALITY SERVICE PERMANENCY

Our permanency established through our record of twenty-four years of satisfactory service to shippers under all conditions at any and all times.

Our fleet of over twelve thousand Tank Cars enables us to deliver promptly at any time or place, the equipment to meet your particular needs.

Long or short time leases at reasonable rates

Call on us for your requirements, whether building new cars, leasing, repairing or rebuilding

GENERAL OFFICES: 111 W. Monroe St., CHICAGO

PLANTS: East Chicago, Ind. Warren, Ohio Sand Springs, Okla.

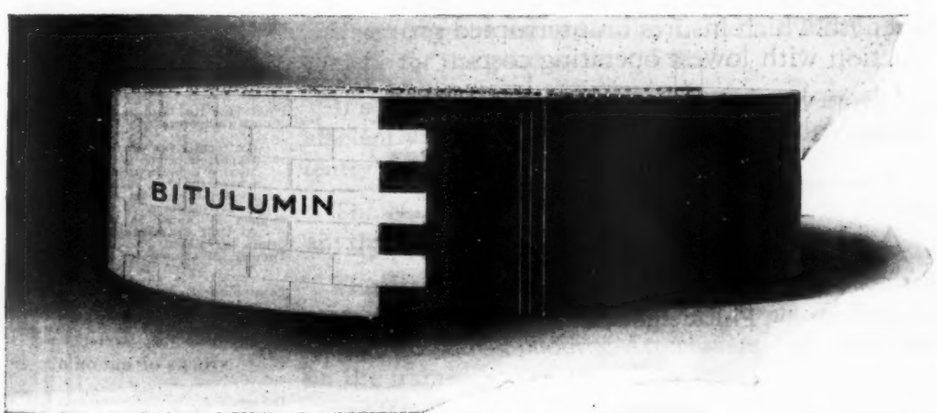
SALES OFFICES:

17 Battery Place NEW YORK | 311 California St. SAN FRANCISCO, CALIF. | 707 Broadway LOS ANGELES, CALIF. | The Adolphus DALLAS, TEX. | 502 Cosden Bldg. TULSA, OKLA.

Cable Address: "GENTANKAR" Chicago—All Codes

PAINT IT FOR LESS MONEY WITH "BITULUMIN"

A high grade Aluminum finish paint that covers over black or any color in one coat. It's the Biturine solution in "Bitulumin" that keeps it from peeling or cracking. "Bitulumin" will spray 500 square feet per gallon. Your sample is ready for you.



MAIL TO NEAREST OFFICE FOR INFORMATION ON "BITULUMIN"

Trade Mark

Hill, Hubbell & Company

Technical Paints

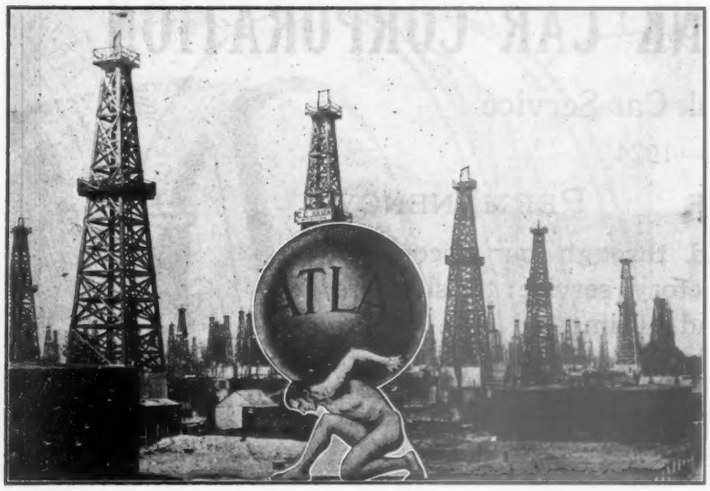
SAN FRANCISCO 115 Davis St. | TULSA Atlas Life Bldg. | LOS ANGELES 331 W. Eleventh St. | NEW YORK 15 Moore St.

Name_____

Company_____

Address_____

Trade Mark



For Steady Production
Specify
Atlas Valve Balls

A SMALL item and yet the valve balls in working barrel valves prove an important factor when failure ties up production. The true measure of economy in buying valve balls is not first cost but length of reliable service.

Atlas Valve Balls made of chrome alloy steel, correct in sphericity to within 1/2 of 1/10,000 of an inch, possess that rugged strength which insures uninterrupted production with lowest operating costs.

Stop your troubles today by installing Atlas Valve Balls.

If your supplier can't furnish them, write direct to

Atlas Ball Company
Glenwood Ave. at Fourth St.
Philadelphia, Pa.

1222

STATISTICS OF CRUDE PETROLEUM FOR JUNE, 1924

(Continued from Page 37)

Rest of State	1,651,000	53,258	1,507,000	50,234	9,115,000	12,172,000
Total Louisiana	1,836,000	59,226	1,700,000	56,667	10,193,000	13,491,000
Montana	254,000	8,193	240,000	8,000	1,222,000	1,397,000
New York	124,000	4,000	114,000	3,800	666,000	563,000
Ohio:						
Central and eastern	408,000	12,161	391,000	13,033	2,334,000	2,445,000
Northwestern	184,000	5,935	185,000	6,167	1,032,000	1,066,000
Total Ohio	592,000	19,096	576,000	19,200	3,366,000	3,511,000
Oklahoma:						
Osage County	3,477,000	112,161	3,515,000	117,167	19,914,000	20,498,000
Rest of State	10,611,000	342,304	10,664,000	355,466	59,091,000	64,394,000
Total Oklahoma	14,088,000	454,465	14,179,000	472,633	79,005,000	84,892,000
Pennsylvania	673,000	21,710	643,000	21,434	3,723,000	3,839,000
Tennessee	300	10	600	20	3,400	4,300
Texas:						
Gulf Coast	2,118,000	68,322	2,067,000	68,900	12,729,000	15,875,000
Rest of State	9,597,000	309,581	9,316,000	310,533	54,136,000	36,940,000
Total Texas	11,715,000	377,903	11,383,000	379,433	66,865,000	52,815,000
West Virginia	508,000	16,387	495,000	16,500	2,979,000	3,212,000
Wyoming:						
Salt Creek	2,916,000	94,065	2,666,000	88,867	18,200,000	15,346,000
Rest of State	710,000	22,903	688,900	22,963	4,211,700	3,118,300
Total Wyoming	3,626,000	116,968	3,354,900	111,830	22,411,700	19,467,300
	61,653,000	1,988,806	59,439,000	1,981,300	352,163,000	342,306,000

*Revised.

BY FIELDS

	May, 1924* Total	May, 1924* Daily Av.	June, 1924 Total	June, 1924 Daily Av.	Jan.-June 1924	Jan.-June 1923
Appalachian	2,364,000	76,258	2,255,000	75,167	13,425,000	14,161,000
Lima-Indiana	210,000	6,774	211,000	7,034	1,175,000	1,180,000
Illinois & S. W. Ind.	774,000	24,968	748,000	24,933	4,372,000	4,815,000
Mid-Continent	32,281,000	1,041,336	31,553,000	1,051,767	177,598,000	167,453,000
Gulf Coast	2,203,000	74,290	2,260,000	75,333	13,807,000	17,104,000
Rocky Mountain	3,887,000	125,387	3,604,000	120,133	23,677,000	20,906,000
California	19,834,000	639,793	18,808,000	626,933	118,109,000	116,681,000
	61,653,000	1,988,806	59,439,000	1,981,300	352,163,000	342,306,000

*Revised.

STOCKS

Stocks of crude petroleum for statistical purposes are classified as follows:

1. Producers' Stocks: Petroleum held on the producing properties (lease or "field" storage). Producers' stocks are reported to the Geological Survey annually and are included in the Survey's final statistics. Since 1919 producers' stocks east of California have ranged from 3,500,000 to 10,000,000 barrels.

2. Pipe Line and Tank Farm Stocks: Petroleum that has been transported from the producing properties but not delivered at refineries or at other points of consumption and is held on tank farms, in tanks along pipe lines, and in the lines. For the States east of California such stocks are reported monthly to the Geological Survey as gross stocks, including the total contents of tanks and pipe lines, and as net stocks, which are gross stocks minus sediment and water. The stocks reported for California are compiled by the Pacific Coast office of the American Petroleum Institute and include producers', pipe line, and tank farm stocks (but not refinery stocks) of crude oil, residuum and tops.

3. Refinery and Others Consumers' Stocks: Petroleum that has been delivered at refineries and at other points of consumption. Stocks of crude petroleum held at refineries are compiled by the Bureau of Mines. Data concerning stocks held by other consumers are not available.

PIPE LINE AND TANK FARM STOCKS OF CRUDE PETROLEUM ON LAST DAY OF MONTH (Barrels)

Stocks of domestic petroleum are reported by field of origin, not by location of storage. Domestic petroleum, east of California, gross and net pipe line and tank farm stocks:

Appalachian:		May 31, '24	June 30, '24	June 30, '23
N. Y., Pa., W. Va., Eastern and Central Ohio	Gross	6,566,000	6,474,000	6,313,000
	Net	6,296,000	6,205,000	6,053,000
Kentucky	Gross	2,673,000	2,733,000	3,255,000
	Net	2,543,000	2,607,000	3,128,000
Lima-Indiana	Gross	1,264,000	1,314,000	1,053,000
	Net	1,035,000	1,084,000	806,000
Illinois-Southwest Indiana	Gross	11,513,000	11,463,000	11,176,000
	Net	11,016,000	10,966,000	10,714,000
Mid-Continent:				
Oklahoma, Kansas, Central and North Texas	Gross	181,749,000	185,190,000	162,147,000
	Net	170,073,000	173,441,000	150,792,000
Northern Louisiana and Arkansas	Gross	38,396,000	39,483,000	26,492,000
	Net	36,223,000	37,286,000	25,585,000
Gulf Coast	Gross	22,348,000	20,776,000	24,017,000
	Net	21,914,000	20,376,000	23,631,000
Rocky Mountain	Gross	26,386,000	27,287,000	9,132,000
	Net	26,374,000	27,275,000	9,128,000
Total pipe line and tank farm stocks east of California	Gross	290,895,000	294,720,000	243,585,000
	Net	275,474,000	279,240,000	229,837,000
California (as stated above)		66,154,000	66,463,000	56,428,000
Imported crude petroleum and topped oil topped in Mexico held in the United States by importers elsewhere than at refineries:				
At Atlantic Coast stations:				
Crude petroleum		357,000	248,000	217,000
Topped oil topped in Mexico		3,171,000	3,638,000	2,650,000
At Gulf Coast stations:				
Crude petroleum		978,000	913,000	520,000
Topped oil topped in Mexico		617,000	716,000	600,000
		5,123,000	5,515,000	3,987,000
Total domestic net pipe line and tank farm stocks east of California; producers', pipe line, and tank farm stocks in California; and stocks of imported crude petroleum held in the United States by importers elsewhere than at refineries		346,751,000	351,218,000	290,252,000

STOCKS OF CRUDE OIL AT REFINERIES IN UNITED STATES (Barrels)
(Bureau of Mines)

	Apr. 30, '24	May 31, '24	May 31, '23
Domestic	34,191,387	35,037,364	24,790,990
Foreign	5,326,765	5,368,548	6,719,598
Total crude oil	39,518,152	40,405,912	31,510,588

IMPORTS AND EXPORTS OF CRUDE PETROLEUM (Barrels)
(From Bureau of Foreign and Domestic Commerce)

	May, 1924 Total	May, 1924 Daily Av.	June, 1924 Total	June, 1924 Daily Av.	Jan.-June 1924	Jan.-June 1923
*Imports:						
From Mexico	6,718,000	216,710	6,206,000	206,867	40,887,000	38,343,000
From other countries	675,000	21,774	454,000	15,133	1,868,000	1,829,000
Total	7,393,000	238,484	6,660,000	222,000	42,755,000	40,172,000
Exports:						
Domestic crude oil:						
To Canada	1,121,000	36,161	1,125,000	37,500	6,056,000	4,232,000
To others countries	628,000	20,258	392,000	13,067	3,316,000	3,514,000
Foreign crude oil	27,000	871	25,000	833	183,000	143,000
Total	1,776,000	57,290	1,542,000	51,400	9,565,000	7,889,000
Excess of imports over exports	5,617,000	181,194	5,118,000	170,600	33,190,000	32,283,000

*Including topped oil.

INDICATED DELIVERIES TO DOMESTIC CONSUMERS OF DOMESTIC AND IMPORTED CRUDE PETROLEUM (Barrels)

(Based on formula—indicated deliveries equal production plus imports minus exports

(Continued on Page 112)

AGITATORS--STILLS--TANKS

We furnish everything in steel for the refinery. Write for our catalog and prices. Immediate shipment.

Kansas City Structural Steel Company

"Nearest the Field"

KANSAS CITY, U. S. A.

Tulsa, Okla. Dallas, Texas Denver, Colo.

It's a Producer!

Users say the same for the Leidecker Machine as they do for the good wells it drills.

It's easy to move. It drills rapidly, effectively and efficiently. It handles casing safely and conveniently.

The No. 20 Machine as shown is adapted to drilling anything up to 2,000 feet.

The frame is made from structural steel. Bolted so it may be disassembled. It's complete—Engine, Calfwheel and Spudding-Attachment—all mounted on the frame.

Leidecker Machines are built in five sizes suitable for depths up to four thousand feet.

Your request will bring all the facts

The Leidecker Tool Company
Marietta, Ohio

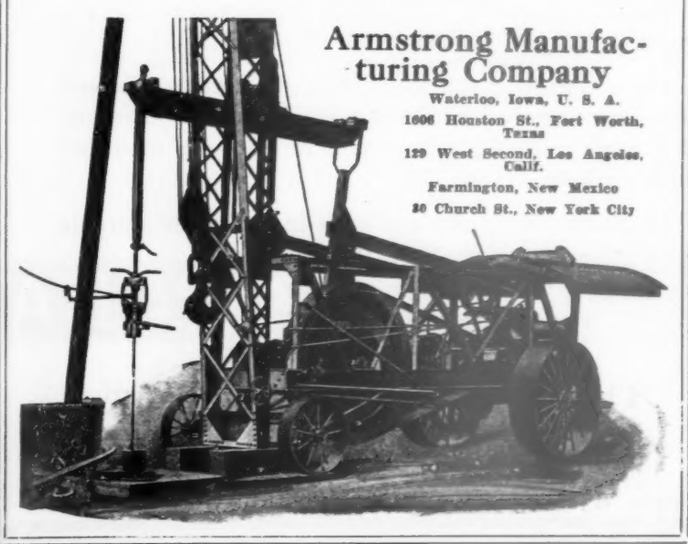
Casper, Wyoming Basin, Wyoming Bartlesville, Oklahoma

ARMSTRONG
—NO. 50 ALL STEEL TRACTION—
OIL WELL DRLL

Experienced Oil Well Operators will appreciate the many special features of this wonderful drilling machine—the greatest improvement in drilling machines in fifty years:

ALL STEEL: No wood to rot, burn, break, shrink, or wear out. No screws, nuts, nor bolts—it is built like a steel bridge, every part hot riveted in place. It cannot warp, nor twist, cannot get out of shape nor throw the shafting out of alignment. CAPACITY, 1,000 feet; weight of tools, 2,200 lbs.; POWER, 22½ H. P.—4-cylinder; 4-cycle gasoline engine. BAND WHEEL CLUTCH guaranteed against breakage from any cause during life of machine. REVERSING TRANSMISSION enables operator to reverse band wheel or any shaft in the machine at will. Makes power more flexible than a steam engine. WIRE LINE DERRICK uses steel cable with saving of 75% of cable cost. CALF REEL works independently, always ready. Pulls 6,000 lbs. casing on single line or 35,000 lbs. with triple casing blocks.

Write for large illustrated descriptive folder, FREE. Get the facts—Write today.



Armstrong Manufacturing Company

Waterloo, Iowa, U. S. A.
1606 Houston St., Fort Worth, Texas
129 West Second, Los Angeles, Calif.
Farmington, New Mexico
30 Church St., New York City

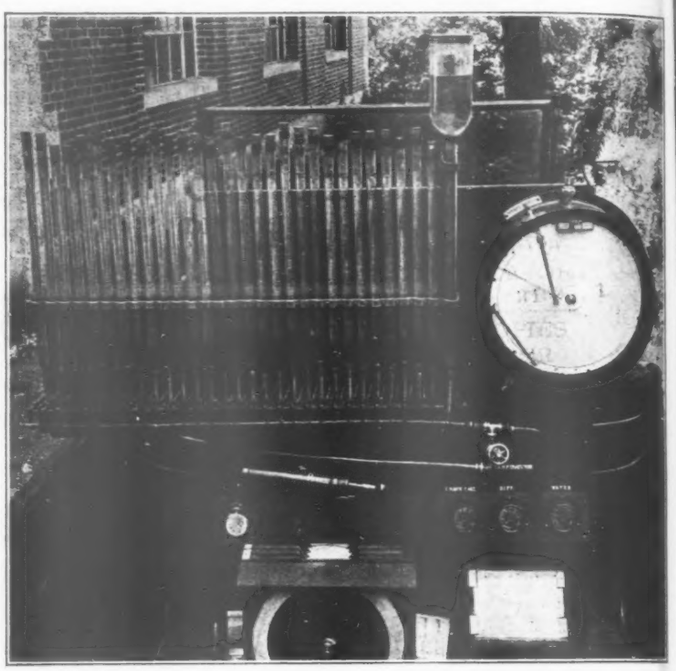
PROGRESS IN HEAT AND POWER RESEARCH WORK

(Continued from Page 41)

of the bureau to compare directly the results of carefully devised service tests of lubricants, particularly in automotive engines with the results of laboratory tests, and perhaps develop new methods of test in the laboratory which shall have more definite usefulness.

For this purpose there are engines specially designed to subject oils to the ordinary as well as to the most severe conditions of use. Samples of the used oils are put through the most exhaustive special laboratory tests, taken apart by fractional distillation in high vacuum and put together again, and compared with the new oils, in order to determine exactly what changes have taken place in use.

There is special equipment also for treating gear lubricants in much the same manner. In due course of time more will be known about the subject of lubrication, if this part of the bureau program is allowed to progress.



Bureau of Standards test car equipment for measuring fuel used for each tenth of a mile traveled, oil and water, temperature, etc.

New Investigation Of Gasoline Prices By Atty. Gen. Stone

WASHINGTON, Aug. 2.—Attorney General Stone has ordered a further inquiry into the gasoline price situation. The report of the federal trade commission on the subject, made at the request of the President, contains information, Mr. Stone said, which warrants a further investigation of the several phases of the problem.

Department Officials described the trade commission's report, which has never been made public, as "very interesting," but indicated that it was incomplete in some ways, and the department of justice will now delve into the leads thus afforded. Mr. Stone was said to believe that such an inquiry might supply the Government not only with a better knowledge of what is going on in the whole oil industry, but with evidence which it might use in its injunction suits recently filed in Chicago to break up selling agreements based upon use of the so-called cracking process in the industry.

There are indications that the Chicago proceedings will be long drawn out. The department was said to anticipate a stiff legal battle ahead, and although the attorney general regards the Government's case as sound, he intends that there shall be left no grounds available for counter-attacking by the oil companies if the department can prevent it.

OKLAHOMA GASOLINE TAX

Gasoline tax collections in Oklahoma for the 12-month period ended July 31 totaled $2,002,567.41, according to announcement today by C. C. Childers, State auditor. Of this sum $1,319,500.85 has been distributed to counties. The State highway construction fund received $634,200. The auditor said $43,350.10 was paid under protest.

CALIFORNIA RECEIPTS AND PETROLEUM IMPORTS

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the week ended July 26 totaled 282,000 bbls., a daily average of 40,286 bbls., against 1,262,000 bbls., a daily average of 180,286 bbls. for the week ended July 19.

At Atlantic Coast Ports—	
Baltimore	None
Boston	None
New York	282,000
Philadelphia	None
Others	None
Total	282,000
Daily average	40,286
At Gulf Coast Ports—	None
Total Atlantic and Gulf Coast Ports	282,000
Daily average	40,286
At Atlantic Coast Ports—	
Baltimore	100,000
Boston	60,000
New York	295,000
Philadelphia	None
Others	120,000
Total	565,000
Daily average	80,714
At Gulf Coast Ports—	
Galveston district	239,000
New Orleans and Baton Rouge	236,000
Port Arthur and Sabine district	175,000
Tampa	35,000
Total	735,000
Daily average	105,000
At All U. S. Ports—	
Total	1,300,000
Daily average	185,714

According to figures collected by the American Petroleum Institute imports of crude and refined oils at the principal ports for the week ended July 26 totaled 1,300,000 bbls., a daily average of 185,714 bbls., compared with 2,151,000 bbls., a daily average of 307,285 bbls. for the week ended July 19.

Cross Fuel Oil Cracking Process

There is a big difference in the profit when you compare cracking fuel oil in the Cross Fuel Oil Cracking Plant with other methods because the Cross Plant produces more gasoline at a lower operating cost and all the products are salable.

THE M. W. KELLOGG CO.
No. 90 West Street,
New York City

BRANCH OFFICES:
700 Baltimore Ave., Kansas City, Mo.
304 Lane Mortgage Bldg., Los Angeles, Cal.

NATIONAL AIROIL BURNER

A Great Deal of the Success in Burning Oil—
"Depends upon the Burner"

NATIONAL AIROIL BURNER

Advantages of "Airoil" Burners

Use only about 1½% of the steam generated by the plant for operation.

Use any grade of fuel oil.

Operate with an oil temperature of less than 150° and an oil pressure of less than 30 pounds.

Will not "flare-back" or "back-fire."

Will not cause carbon deposits.

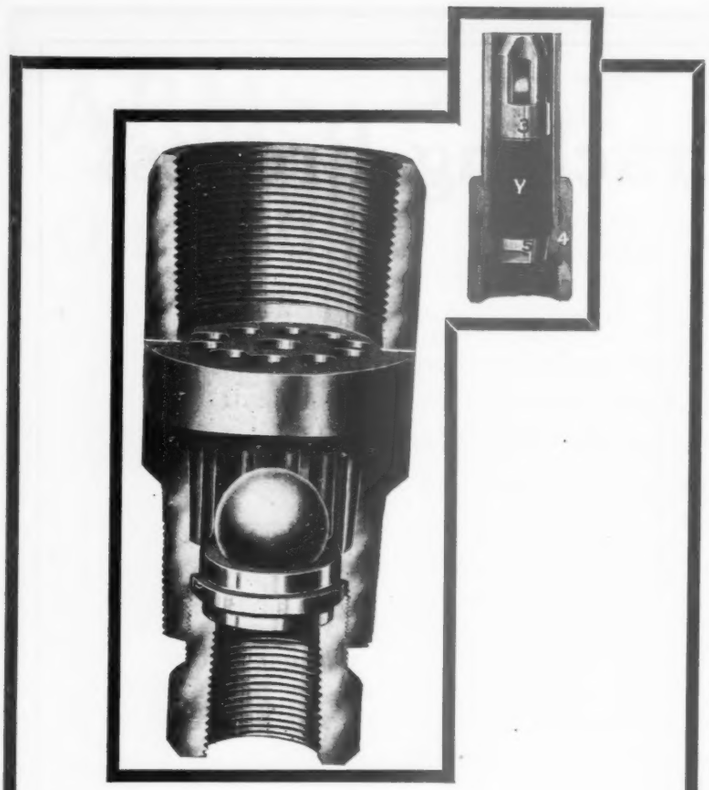
Will not clog-up or drip.

"The complete Designing and Installation of Oil Burning Systems."

We suggest that you send for the following Bulletins:

"Oil Burning Efficiency" and "Oil Burning in Power Plants"

National Airoil Burner Company
922 Thompson St., Philadelphia



You Be the Judge!

Study These Two Valve Designs Which Will Give You Better Service?

Here are two types of standing valve. Study them carefully. Then decide which is better for your work.

One is the old type, in use for years. Loose, leaky leather rings, always troublesome and inefficient. *Inside* the working barrel, therefore with a ball and seat no bigger in diameter than that of the traveling valve—a serious evil because the crude, forced thru the narrow passages at high speed, and subjected to vacuum, suffers a reduction in gravity, causing *cut oil and B. S.*

The other illustration shows the new type—the ROARK. Being *outside* the working barrel, it permits a bigger ball and seat—discouraging cut oil and B. S. It allows a bigger pump stroke, giving greater capacity. California type ball and seat eliminates pounding. *No* cup or leather rings.

With this presentation of facts, we leave it to you as to whether or not the ROARK is worth a trial in your work. At your supply house or direct.

At Your Supply House or Direct

Texas Oil Pump Co
Waco, Texas

Much Drilling Needed To Maintain Luling's Average Production

LULING, Tex., Aug. 2.—The Luling Field averaged 44,298 bbls. a day the past week, of which 25,523 bbls. a day came from Guadalupe County and 18,775 bbls. a day from Caldwell County.

The Magnolia Petroleum Co. is runninng oil through its pipe line as far as Seeley, filling two 55,000-bbl. tanks there. The oil is being run carefully in search of leaks in the line. The Magnolia has extinguished the fires under the stills at its topping plant just outside of Luling and will shut down the plant indefinitely.

It is reported the Magnolia may buy the Rydal Oil Co.'s property here. It is doing 200 bbls. a day from two wells and the price at which the Rydal is endeavoring to sell is said to be $400,000.

The peak of production of the Luling Field was reached on June 10, when 52,000 bbls. were produced. Since that time it has been declining at an average of 1,100 bbls. a day each week. It is hardly likely unless a large number of wells are completed at about the same time, that the field will ever do 52,000 bbls. a day again. The United North & South Oil Co., which owns most of the acreage and which produces the bulk of the crude will complete wells on 25 recently made locations which will stay the downward trend of production. Production in Luling wells, on the average, falls off very quickly and an active drilling campaign is necessary to keep up the daily average output.

Production in Caldwell County, the older part of the field, holds up better than in Guadalupe County, partly because of the fact that the wells are not drilled so close to each other.

Wells in Caldwell County are averaging about 50 per cent water, while in Guadalupe County, the average is about 65 per cent.

The market price of Luling crude was reduced by the Magnolia on July 26 from $1 per bbl. to 90 cents per bbl., the Atlantic Oil Producing Co. meeting the price the same day.

CANADIAN FIELDS

(Continued from Page 48)

the field carrying out investigations with this end in view.

Ontario Fields

In the Ontario Fields, Union Natural Gas Co.'s No. 251, J. Shanks farm, near Port Alma, is reported drilling around 1,700 feet on its Trenton test. A gas production of about 300,000 feet a day was struck in the Tilbury sand. In Dover Township, Kent County, Eugene Coste & Co.'s No. 7, Matt Doyle farm, is drilling around 700 feet. The Glenwood Natural Gas Co. is reported to have abandoned its attempt to deepen its discovery well on the Hugh Shanks farm, west of Port Alma, and is bringing in a gas engine to pump the well at the former producing horizon. In Essex County, the Southern Ontario Gas Co.'s test near Colchester, is reported drilling. In Lambton County the High Pressure Oil & Gas Co.'s No. 2 deep test, near Arkona, is rimming down to lower the 4½-inch casing to the Trenton limestone.

STATISTICS OF CRUDE PETROLEUM FOR JUNE, 1924

(Continued from Page 108)

plus stocks, exclusive of consumers' stocks, at beginning of month minus stocks at end of month.)

	May, 1924* Total	May, 1924* Daily Av.	June, 1924 Total	June, 1924 Daily Av.	Jan.-June 1924	Jan.-June 1923
Domestic petroleum, by fields of origin:						
Appalachian	2,134,000	68,839	2,282,000	76,067	13,823,000	13,501,000
Lima-Indiana	180,000	5,806	162,000	5,400	1,066,000	1,065,000
Illinois and S. W. Ind.	601,000	19,387	798,000	26,600	4,497,000	4,247,000
Mid-Continent	29,723,000	958,807	27,122,000	904,067	169,775,000	148,119,000
Gulf Coast	2,622,000	84,581	3,798,000	126,600	17,405,000	18,266,000
Rocky Mountain	2,862,000	92,322	2,703,000	90,100	16,106,000	13,621,000
California	18,725,000	604,032	18,499,000	616,633	113,808,000	109,628,000
Deliveries and exports	56,847,000	1,833,774	55,364,000	1,845,467	336,480,000	303,747,000
Exports of domestic crude oil	1,749,000	56,419	1,517,000	50,567	9,372,000	7,746,000
Deliveries	55,098,000	1,777,355	53,847,000	1,794,900	327,108,000	296,001,000
Imported petroleum	7,349,000	237,064	6,243,000	208,100	41,801,000	41,194,000
Deliveries of domestic and imported petroleum	62,447,000	2,014,419	60,090,000	2,003,000	368,909,000	337,195,000

*Revised.

DAYS' SUPPLY OF PIPE LINE AND TANK FARM STOCKS OF CRUDE PETROLEUM

(Based on average daily rate for month of deliveries to domestic consumers and exports)

*May 31, 1924	June 30, 1924	June 30, 1923
167	171	151

*Revised.

NUMBER OF PRODUCING OIL WELLS COMPLETED*

May, 1924	June, 1924	Jan.-June, 1924	Jan.-June, 1923
1,657	1,501	7,353	8,772

For States east of California, from The Oil and Gas Journal; for California from the American Petroleum Institute.

SHIPMENTS OF CALIFORNIA OIL THROUGH PANAMA CANAL TO EASTERN PORTS IN UNITED STATES

(From the Panama Canal Record)

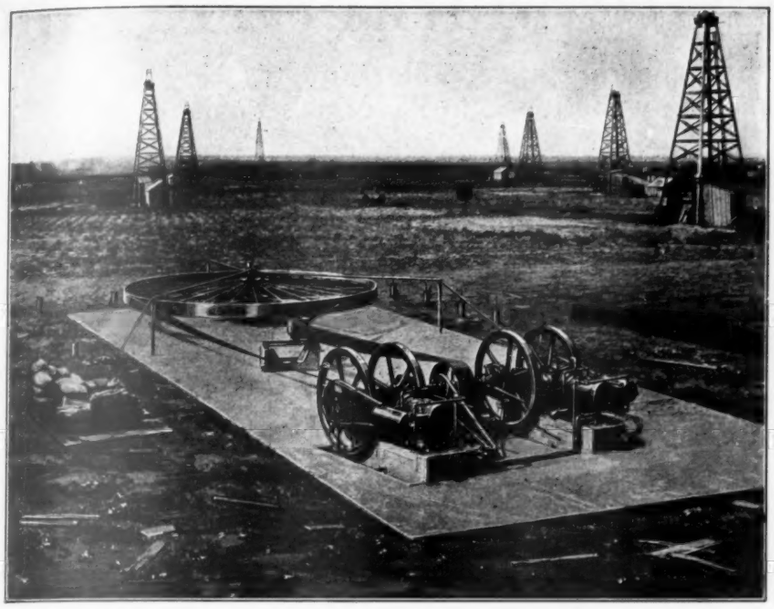
(Compiled from declarations by masters of vessels reported in tons of 2,240 pounds.)

	May, 1924	June, 1924	January-June, '24	January-June, '23
Crude oil; long tons	497,413	459,251	3,309,487	2,794,633
Barrels (approximately)	3,631,000	3,363,000	24,160,000	19,962,000
Refined products; long tons	49,888	53,395	372,659	242,500

OIL PIPE LINE MILEAGE AND CAPACITY, BY STATES

The following tabulation, compiled from reports of companies operating oil pipe lines, shows a total of 82,832 miles of trunk and gathering lines in the United States, having a cubic capacity of 14,447,500 barrels:

	Trunk Lines Miles	Trunk Lines Cubic Capacity of Pipes (Bbls.)	Gathering Lines Miles	Gathering Lines Cubic Capacity of Pipes (Bbls.)
Arkansas	591	186,400	645	75,300
California	3,078	988,900	1,461	207,600
Colorado	.....	.....	29	1,100
Illinois	1,937	685,400	1,218	141,900
Indiana	1,469	614,100	503	29,900
Iowa	77	37,700	.....	.....
Kansas	2,542	801,400	2,762	214,300
Kentucky	592	50,100	1,383	45,600
Louisiana	1,751	647,500	806	77,300
Maryland	36	4,700	.....	.....
Michigan	138	26,200	.....	.....
Missouri	2,485	993,400	.....	.....
Montana	93	9,100	20	400
Nebraska	377	248,700	.....	.....
New Jersey	476	116,900	.....	.....
New York	1,192	217,300	687	30,200
Ohio	2,623	768,000	6,122	275,300
Oklahoma	7,695	1,734,400	9,689	675,400
Pennsylvania	5,274	1,100,600	6,094	261,300
Tennessee	.....	.....	5	100
Texas	7,379	2,136,000	4,665	504,100
West Virginia	719	71,100	4,957	313,900
Wyoming	1,273	291,000	219	20,400
Total	41,497	11,628,900	41,335	2,818,600



Reid Twin Engine Installation

Two Reid 40 HP. Gas Engines and a Reid Type PW All-Metal Band Wheel Power comprise the pumping plant here illustrated.

The twin engines, two forties, are connected by a shaft and two cut-off type clutches. This arrangement allows the engines to be operated independently of one another, a feature which insures practically constant service.

The power is the Reid Type PW Band Wheel Power, with 24-foot wheel, 24-inch throw eccentrics and force feed oiling system with all lubricated surfaces protected by dust covers.

This plant is housed in a steel frame power house with concrete floors and has already given nearly one year's satisfactory service and promises of many more.

Write for additional information on these twin engine pumping plants

JOSEPH REID GAS ENGINE COMPANY, Oil City, Pennsylvania, U.S.A.

BRANCHES AND AGENCIES—Marietta, Ohio; Logan, Ohio; Newark, Ohio; Ft. Recovery, Ohio; Haynesville, La.; Shreveport, La.; Charleston, W. Va.; R. B. Moore, Bolivar, N. Y.; Bradford Supply Co., Robinson, Ill.; Frick & Lindsay Co., Bradford, Penna., and Kentucky Distributors; S. R. Shoup, 708 Pacific-Electric Bldg., Los Angeles, Cal.; Oklahoma, Kansas, Texas, Arkansas and Wyoming, Frick-Reid Supply Company, Tulsa, Oklahoma, and Branches. Branch Shop, Tulsa, Okla.

The stiffest test for belting

In the oil fields, day in and day out—exposed to sun or rain, belting must do the work allotted to it.

Under such severe conditions Republic Belting has shown its true worth. No matter how great the task put to it Republic Belting has proved itself far superior to any other.

Republic Belting insures uninterrupted service with the best possible service results.

THE REPUBLIC RUBBER COMPANY
YOUNGSTOWN, OHIO

THE REPUBLIC RUBBER CO. YOUNGSTOWN-OHIO

REPUBLIC BELTING

Oil Securities Share Market Advance

Secure Their Rise in the Face of Unfavorable Industry News. After Tendency to React Now Believed in Favorable Position.

By N. O. Fanning
Room 543, No. 30 Church st., New York

NEW YORK, Aug. 4.—The appreciable advances made in oil securities during the past week have reflected the general rise in all securities and cannot be attributed to any special strength of petroleum stocks as a class. Taking the recent market advance as a whole, the oils have not responded in the pronounced way of other industrial securities, and in fact they have had to score their rises in the faces of unfavorable industry news. After a rise in which the seculative oil shares moved forward several points and the conservative shares showed some strength, the oils showed a tendency of reacting. With crude oil cuts out of the way and in viwe of the general tenor of the market, active traders in oil securities believe these issues will be in a favorable position to reflect any reassuring news.

Phillips Petroleum Co. reports for the six months ended June 30, 1924, net income of 6,166,952 after taxes, depreciation, depletion, etc., equivalent to $4.16 a share earned on 1,480,533 outstanding shares of no par value stock. The statement follows:

Net after charges, including federal and other tax reserves	$10,048,031
Depreciation and depletion	3,881,079
Net income	$ 6,166,952
Dividends	1,479,291
Surplus	$ 4,687,661

The company states that no comparison can be made with the first six months of 1923 because no estimate was then made for depletion and depreciation. Earnings for the entire year of 1923, however, were $3.91 a share and earnings for the six months of 1924, including the 25 per cent increase in outstanding common stock, were $4.15 a share. The company's inventory of crude oil was adjusted in the first quarter of this year, but no change was made in the second quarter. When books closed on June 30 inventory was being carried considerably under the posted price of that date, therefore, the price cuts since that time have reduced the value of inventory $173,080 under the book value of June 30. Inventory of gasoline was carried at the average wholesale selling price for June. On June 30 crude oil in storage had been somewhat reduced from the high point of the year, it is stated, but some oil is now being stored. The company says it is prepared to store its own oil during periods of congestion or low prices. Gasoline production is being sold, it is stated, and stocks are being substantially reduced.

White Eagle Oil Co.

The White Eagle Oil & Refining Co. reports for the quarter ended June 30, 1924, net income of $611,378 after expenses and miscellaneous charges but before depreciation, depletion and federal taxes, against $944,516 in the second quarter of 1923. Net income for the first half of 1924 totaled $1,618,967, against $1,734,586 in the first half of 1923. The income for the six months ended June 30, 1924, compares as follows:

	1924	1923
Sales	$6,632,872	$7,796,050
Cost and expenses	4,866,459	6,023,879
Operating profit	$1,766,413	$1,772,171
Other income	120,668	104,721
Total income	$1,887,081	$1,876,892
Miscellaneous charges	268,114	142,307
*Net income	$1,618,967	$1,734,585

*Before depreciation, depletion and federal taxes.

The income account for the quarter ended June 30, 1924, compares as follows:

	1924	1923
Sales	$4,043,884	$4,259,777
Cost and expenses	3,341,194	3,318,908
Operating profit	$ 702,690	$ 940,869
Other income	63,667	52,003
Total income	$ 766,357	$ 992,872
Miscellaneous charges	154,979	48,356
*Net income	$ 611,378	$ 944,516

*Before depreciation, depletion and federal taxes.

Barnsdall Corporation

The Barnsdall Corp. reports for the six months of 1924 net earnings after depreciation, taxes, charges, depletion, etc., of $857,380. This compares with $18.848 in the corresponding half of 1923.

Cities Service Co.

Gross earnings of Cities Service Co. for the 12 months ended June 30 were $17,110,489, compared with $16,287,866 for the previous 12 months. The net income available for the common stock and reserves totaled $9,251,822, or $20.03 on the average amount of common outstanding, compared with $8,244,111, or $17.71 a share on the common for the 12 months ended June 30, 1923.

Ohio Fuel Supply Co.

The Ohio Fuel Supply Co. reports for the six months ended June 30, 1924, net earnings of $3,080,009, after depreciation, taxes, etc., equivalent to $1.94 a share (par $25) earned on $39,626,000 outstanding capital stock. This compares with $3,693,044 or $2.33 a share for the correpsonding period of 1923. The income account for the six months ended June 30, 1924, compares as follows:

	1924	1923
Gross	$9,721,378	$9,793,955
Net after taxes, etc.	3,080,009	3,693,044
Dividends	1,981,300	1,783,979
Surplus	$1,098,709	$1,909,065

Following the reduction of the par value of Union Oil of California stock from $100 to $25, exchanging present shares for the new in the ratio of one to four, the dividend rate will be increased to 8 per cent if present plans are carried out. The current dividend rate is 7.20 per cent.

Pierce Oil Corp.

Pierce Oil Corp., using part of the proceeds of the recent sale of stock, has paid off all of its indebtedness, according to William H. Coverdale, chairman of the board. In cleaning up its indebtedness the company paid the receiver of the International-Great Northern Railway Co. $1,550,000 in cash, the amount agreed upon in settlement of the $2,088,000 judgment of the railroad against the company, and paid off $845,000 of acceptance loans, $680,000 of unsecured notes, $103,000 in past due notes and about $100,000 in overdue vouchers. After these payments the company had left about $3,325,000 cash. Part of this will be used in a construction program.

Standard of California

Standard Oil Co. (California) has declared regular quarterly dividend No. 63, of 50 cents a share, payable on September 15, 1924, to stockholders of record August 16.

Pure Oil and O. P. & R.

Stockholders of the Oklahoma Producing & Refining Corp. have ratified the proposal to exchange their common stock for Pure Oil Co. stock on the basis of 10 shares of the former for one of the latter. There are 490,000 shares of Oklahoma Producing & Refining Co. stock outstanding, which will require a new issue of 40,000 shares of Pure Oil stock. The Guaranty Co. has been appointed distributing agent for the exchange. Oklahoma Producing stockholders who exchange their stock by August 15 will receive the next regular quarterly dividend of 37½ cents on Pure Oil, payable September 1.

Southern Pipe Line Co., for six months ended June 30, 1924, reports net profit of $272,726, equal to $2.72 a share earned on $10,000,000 capital stock.

British American Ltd.

The British American Oil Co., Ltd., of Toronto is reported to have experienced fairly satisfactory results for the half year ending June 30. Unlike the first half of 1923, there were no radical cuts in crude oil such as to necessitate taking losses on refined products. The demand for gasoline and motor oils was fairly good; and if maintained for the next six months may make a new record for the company. Shareholders were informed recently that gross business for the half year was at a new record mark.

Sinclair Consolidated

The Sinclair Consolidated Oil Corp. and subsidiaries' consolidated statement of income for the six months ended June 30, 1924, follows:

Gross earnings and miscellaneous income exclusive of inter-company sales and charges for transportation	$62,438,184.33
Purchases, operating and general expenses, maintenance, insurance, taxes, etc.	50,561,564.63
Net earnings	$11,876,619.70
Deduct—Interest and discount chargeable against income.	2,823,515.81
Income available for surplus and reserves	$ 9,053,103.89

COLORADO PIPE LINE PERMIT

CASPER, Wyo., Aug. 4.—The Colorado Oil & Gas Pipe Line Co. has been granted a permit to lay a pipe line from a point near Fort Collins to Denver and other Colorado points. The line is expected to be used for both oil and gas.

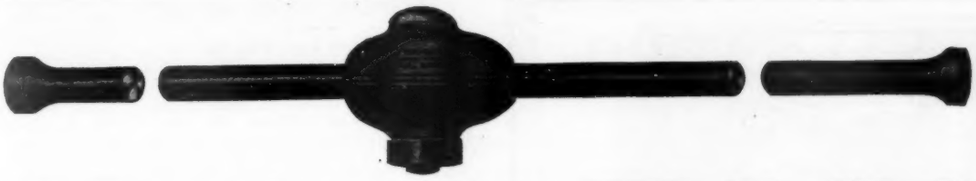
NEW YORK STOCK EXCHANGE—LIST OF ACTIVESTOCKS

No.	Stock—	Par	†Dividend Rate	Closing Quotations Aug. 4.	July 28	Range High	1924 Low
1.	American Republics	..	..	*40	*36	43	26
2.	Associated Oil	..	6	*29½	*28¾	34⅝	27⅝
3.	Atlantic Refining, common	100	4	80	83¼	140½	83½
4.	Barnsdall "A"	25	..	20½	19⅜	18⅞	14
5.	California Petroleum, common	25	7	23⅜	22⅛	29¼	21⅝
6.	Cosden & Co., common	..	..	29	27⅝	40¼	23¼
7.	General American Tank	..	†3	42	*42	46¼	38¼
8.	General Asphalt	100	..	44	43¼	49	31⅝
9.	General Petroleum	..	8	46	44¼	41½	38⅝
10.	Houston Oil	100	..	72⅝	71	83½	61
11.	Independent Oil & Gas	10	..	8	7½	9¼	6⅜
12.	Indian Refining	10	..	*6	6⅜	7	3⅜
13.	Invincible Oil	50	..	13	12⅞	15⅞	11¾
14.	Maracaibo	..	..	31½	30	37½	25¾
15.	Mariand	..	..	32	31½	42	29
16.	Mexican Seaboard	..	..	21½	20⅞	24⅛	14⅛
17.	Middle States Oil	10	..	1½	1⅞	6⅝	1⅝
18.	National Supply	50	6	59	57¾	72⅛	56
19.	Pacific Oil	50	†2	50	47¾	58¼	45
20.	Pan-American common	50	16	57½	56	61¼	44¼
21.	Panhandle Prod. & Ref.	..	..	*2½	2¼	4½	2¼
22.	Phillips Petroleum	..	†2	36⅞	35	42⅛	32¾
23.	Producers & Refiners	50	..	31⅝	26¼	43½	22⅝
24.	Pure Oil, common	25	6	24⅝	24⅜	25⅝	20
25.	Royal Dutch, N. Y. sh.	13.40	2.62	42⅞	44½	59½	48
26.	Shell Transport	10	x92⅛	*34⅞	*35	41½	33
27.	Shell Union, common	..	†1	17⅛	17	20⅛	16¼
28.	Simms Petroleum	10	..	14½	13¾	14⅜	10⅜
29.	Sinclair Consolidated, common	..	†2	17½	17⅛	27⅛	18⅛
30.	Skelly Oil	25	..	20⅝	18⅞	28	17⅝
31.	Standard of California	25	8	60	57⅜	68½	55½
32.	Standard Oil of New Jersey	25	4	36⅛	35⅞	42½	33
33.	Standard of New Jersey, pfd.	100	7	*118½	*118	118⅝	115⅝
34.	Superior Oil	..	..	7⅝	7⅛	7⅝	2⅝
35.	The Texas Co.	25	12	41	40¼	45⅝	37⅝
36.	Texas Pacific Coal & Oil	10	..	10¾	9⅝	15¼	8¼
37.	Tide Water Oil	100	4	127½	*125	151	119
38.	Transcontinental	..	..	6⅝	6⅝	6¼	3¾
39.	Union Tank, common	100	5	*119	112	104	94
40.	White Eagle Oil & Refining	..	2¼	*23⅝	23¾	29⅝	23⅛
	Standard Oil Stocks						
41.	Anglo-American Oil	£1	25	15½	*15⅛	18	14⅝
42.	Borne Scrymser	*100	12	*210	*215	264	150
43.	Buckeye Pipe Line	50	14	61	60	85½	60
44.	Chesebrough Mfg., common	25	11	*50	49½	53¾	29¼
45.	Continental Oil	25	8	*43½	42	54⅞	42½
46.	Crescent Pipe Line	25	..	11½	12⅜	20	16
47.	Cumberland Pipe Line	100	10	*144	145	144	109
48.	Eureka Pipe Line	100	8	*95	*95	105	95
49.	Galena-Signal, common	100	4	*58	60	69¾	55¼
50.	Humble Oil & Refining	25	4.8	36½	36	43¾	36
51.	Illinois Pipe Line	100	12	*132	*132	161	131
52.	Imperial Oil, Ltd.	25	12	107	102½	119	99
53.	Indiana Pipe Line	50	16	92¼	91	100	85
54.	International Petroleum Co.	100	x50	20⅝	19	22⅛	16⅞
55.	Magnolia Petroleum Co.	100	4.5	135	131	160	124
56.	National Transit	12.50	16	*21½	*21½	25⅞	21¼
57.	New York Transit	100	10	*63	64	97	69
58.	Northern Pipe Line	100	6	*83	*83	107½	80½
59.	Ohio Oil Co.	25	8	61¾	61¼	79½	60
60.	Penn-Mex Fuel	25	..	34½	*28	45⅝	32¼
61.	Prairie Oil & Gas	100	8	217	211	269	204½
62.	Prairie Pipe Line	100	8	*106	105	111	100
63.	Solar Refining Co.	100	15	189	181	225	170
64.	Southern Pipe Line	100	16	93½	96	100	89½
65.	South Penn Oil	100	..	*138	*137	176	130
66.	South West Pa. Line	100	8	*87	*87	93	80
67.	Standard of Indiana	25	10	59	57½	58⅝	55⅝
68.	Standard of Kansas	25	10	41	40½	50½	38⅝
69.	Standard of Kentucky	25	16	115¼	115⅝	130	102¼
70.	Standard of Nebraska	100	20	*247	244	256½	198
71.	Standard Oil of New York	25	5.6	41	40	48	37⅝
72.	Standard of Ohio, common	100	10	297	285	236	277
73.	Swan & Finch	100	..	*43	*46	81	34
74.	Vacuum Oil	25	10	66½	62⅜	69¼	56½
75.	Washington Oil	..	10	*28	28½	29	25
	Miscellaneous Stocks						
76.	Cities Service, bankers' shares	..	†21	*14	*13⅜	16	13¼
77.	Gulf Oil Corp. of Pennsylvania	25	6	*59⅝	*58	65	56⅝
78.	Mutual Oil	5	10	*10⅞	10⅝	14	9⅝

*B'd, no sales. †In dollars. §The figures in this column are kept up to date as far as possible, but are not guaranteed. xCents per share.

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange was as follows:

Aug. 4	49.71	June 30	47.69	May 27	49.01
July 28	47.86	June 23	46.92	May 20	48.25
July 21	48.38	June 17	47.94	May 13	48.24
July 14	46.96	June 10	47.63	May 6	49.59
July 7	48.38	June 3	48.88	Apr. 29	49.56



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The Sheffield Super-Steel Pull Rod has an *unequalled performance record.*

The head will not pull off because of the special fillet under the head.

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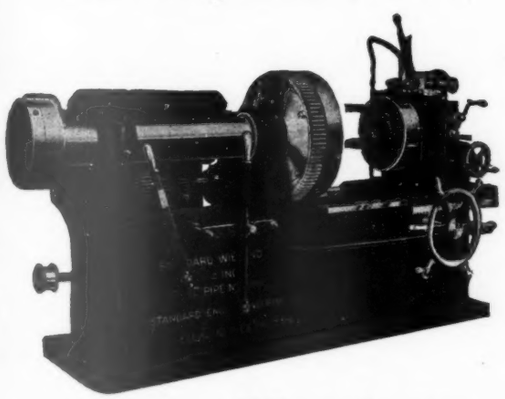

What do you Look for in a Pipe Threader?

Standard Pipe Threaders and Cutters

Enduring strength, swift, efficient action, operating economy — all these are what you naturally look for in a Pipe Threader and Cutter; and all these are the inherent characteristics of the STANDARD.

Enduring strength resulting from sturdy construction; swift efficient action resulting from the use of wide chasers and constant speed motors; operating economy resulting from simplicity of construction and design have given the STANDARD the wide reputation it so well deserves.

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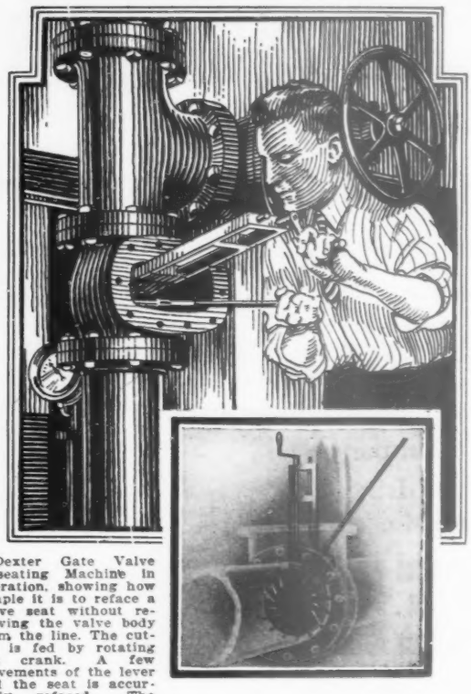

Dexter Gate Valve Reseating Machine in operation, showing how simple it is to reface a valve seat without removing the valve body from the line. The cutter is fed by rotating the crank. A few movements of the lever and the seat is accurately refaced. The same cutter refaces gate or split disc.

Are You Paying 10 Times Too Much for Valve Replacement and Repair?

Figure what you spend in a year for valve maintenance.

If you are not equipped with a Dexter Valve Reseating Outfit, no matter what the amount it's at least ten times too much.

The Dexter Machine makes worn leaky valves as good as new in a few moments, without removing a valve body from its pipe line. No skill is required to operate it. Valves and gates can be reseated again and again. Steam and oil leakage losses are eliminated.

Compare your annual valve maintenance cost with the cost of a complete Dexter Outfit and you'll see why most producers and refiners consider the Dexter Machine essential for efficient operation.

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DEXTER VALVE RESEATING MACHINES

THE MANUFACTURE OF FISHING TOOLS AN ART

(Continued from Page 32)

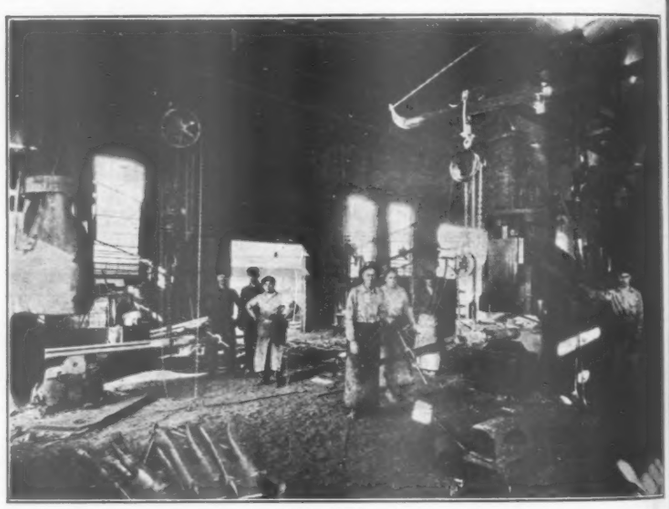
and labor necessary, which rarely exceed $200. This figure is reasonable when the total amount of money at stake is considered. In other instances, the manufacturer places the tool in stock, the contractor paying half of its value for rental. Other arrangements are made according to agreements between the parties.

Attention to Tools

"Another feature of the fishing tool service lies in the constant attention necessary for the rental tools carried in stock," said the head of a large concern in Oklahoma. "Fishing tools are given severe wear. If they break through any fault of workmanship of material, we are compelled to absorb that loss. If the contractor has abused the tool he pays us a reasonable damage charge. In any case, after the tool is returned, it is taken apart, the working parts are oiled carefully and any worn or battered parts are refinished or replaced and the tool is oiled and painted and again placed in stock as near its original condition as possible.

"We figure the average life of a tool and then charge the contractors accordingly. In most cases a tool must exceed its average use if the manufacturer makes a profit."

The manufacture of fishing tools involves the making of heavy pieces of equipment from various kinds of steel.



Forges used in manufacturing fishing tools and other drilling equipment.

Heavy equipment is necessary, but the greatest care is exercised in gauging every piece that is turned out. Threads and joints are gauged to the one-thousandth part of an inch. Delicate micrometers and calipers are employed at every stage in the manufacturing process from the forge room to the finishing work.

The steel for the fishing and drilling tools is shipped in billet form by car load lots. These billets measure about 6 inches by 6 inches square and 6 feet long. Many are even larger, often measuring 8 inches by 8 inches and up to the larger sizes from which the huge 22-inch drilling bits are made. The lengths are usually 6 to 8 feet. The billets will weigh from 400 pounds to about 3,500 pounds. Great lengths of "rounds" or stem material are also carried in stock, in addition to other grades of material used for making working tools and machined parts in special fishing tools.

Traveling cranes are used to bring the billets to the huge furnaces, where the metal is heated before being shaped by the steam hammers. Repeated trips to the furnace are necessary before the rough forging of the tool has been made and the idea is given its first development. The steel for the tapered box and pin joints is then made up and welded to the tool in some cases. Special coke furnaces are generally used for welding whereas oil is used in most cases for heating the larger pieces.

The disinterested observer cannot fail to appreciate the effectiveness of the furnaces which are capable of developing a heat of more than 3000 degrees Fahrenheit. Huge cranes swing the red-hot billets to the steam hammers after huge tongs have been clamped firmly about the billet. The steel is handled with an experienced manner which might indicate that it weighed only a fraction of its true weight. The blows of the hammer are terrific but the action is controlled by a delicate mechanism so that a slight shifting of the levers is sufficient to deliver the hardest blows.

Upon the completion of the forge work the piece of steel is delivered to the machine shop, where the box and pin joints are machined in huge lathes, operated in a precise manner. The manufacture of the cable tool joints is a delicate operation and is one requiring the best of tested equipment and the greatest care and attention on the part of the workmen. Slight variations in the degree of taper will result in badly fitting joints with the probability that pickup fishing jobs may be turned into jarring jobs. Shop gauges are used in gauging the joints. These gauges are tested at intervals with the shop templates and any variations due to wear are quickly corrected. The shop templates are made from master templates furnished by specialists. The lathes are tested at intervals also to see that they are operating as they should. Great care is used in placing the articles on the lathes. Drill presses, shapers and other machines form additional important articles of equipment needed in turning out the fishing tools.

Accuracy Uppermost

The importance of accuracy in making fishing and drilling tools is uppermost, every manufacturer says. The heavy equipment is made necessary because of the heavy articles turned out, but the care in finishing the huge tools is applicable to the watchmaker's trade as well as the makers of oil well supplies.

"The best fishing tools are the ones that have as few parts as possible," said one well-known manufacturer. "Fishing tools should be strong and accurate and not fancy. Some extra parts and mechanical contrivances are required occasionally, but as a rule jewelry, or the small parts as they are known in the field, is abhorred by fishermen. It's a good fisherman who can fish for two or three days without adding to the accumulation in the hole."

The manufacturer accordingly makes no attempt to "pass the buck" in his job of giving instant and effective service to the driller and the contractor. He carries the accumulated overhead in the shape of large stocks of raw materials and finished products and the investment in efficient machines and equipment ready for the instant demand of the unfortunates who are having trouble in completing their wells.

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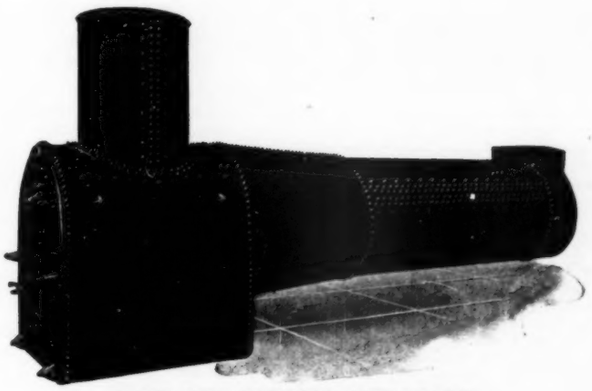

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Rotary Tool Joint

OKLAHOMA FIELDS

(Continued from Page 51)

No. 1 Dean, C NE NE NE, Section 13-7-7, as dry at 3,405 feet.

The Magnolia Petroleum Co.'s No. 1 Tiger, CNL NW SW, Section 32-8-8, in the west part of the field which has been been attracting much attention of late, was good for 1,181 bbls. in the first 15 hours from sand at 3,158-63 feet. It started at 107 bbls. the first hour, made 90 bbls. the next hour and 80 bbls. the third.

Another new effort that was starting in dangerous territory was Robinson and others' No. 1 Grayson, NW cor. SW, Section 19-11-10, which was building a rig.

The Cosden Oil & Gas Co.'s No. 3. NW cor. SW NE, Section 3-11-11, was good for 420 bbls. after a 5-quart shot in sand at 2,660-76 feet.

Papoose Pool

In the Papoose Pool, Gibson & Zahnizer had a rig up for No. 3 Carter, C SE NE NW, Section 4-9-9. The Papoose Oil Co.'s No. 9 Alexander, C NW SE SE, Section 4-9-9, was swabbing 50 bbls. daily, half of which was water. Sand was found at 3,306-29 feet and the hole was a foot deeper. The Magnolia Petroleum Co.'s No. 1 Brown, C NE NE SE, Section 18-9-9, in the Gilcrease aren, was shut down for orders while making 200 bbls. daily from sand at 3,108-14 feet. The Margay Oil Co.'s No. 5 Brown, C SE NW SW, Section 17-9-9, was likewise shut down for orders with 2,500 feet of oil in the hole from sand at 3,113-18 feet. The Gilcrease Oil Co.'s No. 2 Brown, C SW SE SW, Section 17-9-9, was drilling at 3,051 feet in sand reached at 3,046 feet and made 196 bbls. in 24 hours.

Production in Stroud

A resume of the present production in the Stroud Field, compared with the initial production of the wells, shows the surprisingly sharp decline that has been a disappointing feature of the field to the producers. Following is a comparison of some of the individual wells:

Company, Well, Farm and Location—	Prod.	Prod.
Roxana Petroleum Corp. No. 1 Zoller, Section 1-14-6	2,066	547
Roxana Petroleum Corp. No. 2 Zoller, Section 1-14-6	1,869	878
Roxana Petroleum Corp. No. 3 Zoller, Section 1-14-6	2,912	411
Roxana Petroleum Corp. No. 4 Zoller, Section 1-14-6	2,643	406
Roxana Petroleum Corp. No. 5 Zoller, Section 1-14-6	940	613
The Texas Co. No. 1 Barber, Section 11-14-6	945	168
Wolverine Oil Co. No. 1 Barber, Section 11-14-6	853	337
Wolverine Oil Co. No. 2 Barber, Section 11-14-6	869	317
Amerada Petroleum Corp. No. 1 Lewis, Section 12-14-6	2,712	600
Amerada Petroleum Corp. No. 2 Lewis, Section 12-14-6	1,702	480
J. A. Hull Co No. 1 Dowell, Section 12-14-6	1,945	700
J. A. Hull Co. No. 2 Dowell, Section 12-14-6	1,660	600
J. A. Hull Co. No. 3 Dowell, Section 12-14-6	1,200	420
J. A. Hull Co. No. 1 Petty, Section 12-14-6	2,053	324
Union Petroleum & Supply Co. No. 1 Townsite, Section 12-14-6	2,640	525
Union Petroleum & Supply Co. No. 3 Townsite, Section 12-14-6	500	fsg
Union Petroleum & Supply Co. No. 1 Scott, Section 12-14-6	2,000	745

Garland and the Tidal Oil Co. were drilling at 2,600 feet in No. 1, SW cor. NW SW, Section 6-14-7. C. F. Noble was spudding No. 1 Lewis, SW cor. NE SW, Section 7-14-7. The Waite Phillips Co.'s No. 3 Jack, SE cor. NW NW, same section, made 1,637 bbls. natural from sand at 4,040-4,140 feet. Wood & Farren's No. 1 Jack, CEL NW SW NW, Section 7-14-7, was fishing tools and making 35 bbls. hourly from sand at 4,067-4,151 feet.

North Fox District

In the North Fox district of Carter County, the Humble Oil & Refining Co. had a rig up for No. 2 Jennings, C NW NW SE, Section 28-1s-3w.

The same company's No. 2 Carpenter, C NE NE NE, Section 22-2s-3w, was abandoned as dry at 2,074 feet. The Magnolia Petroleum Co.'s No. 6 Lahman, C NW SW SE, Section 23-2s-3w, was making 150 bbls. from sand at 2,422-55 feet, with total depth at 2,498 feet. The Cameron Refining Co.'s No. 1, C SE NE SW, Section 24-2s-3w, was good for 385 bbls. from broken sands at 2,273-2,742 feet. The Magnolia Petroleum Co.'s No. 7, C NE SE NE, Section 25-2s-3w, made 15 bbls. from broken sand at 2,230-40 and solid sand from 2,240-57 feet, with total depth at 3,125 feet. C. R. Smith was cleaning out No. 7 Fee, C NE SW, SW, Section 26-2s-3w, with 1,500 feet of oil in the hole from sand at 3,250-3,301 feet.

Wirt Franklin's No. 2 Underwood, C SE NW SW, Section 5-3s-2w, made a flow of 40 bbls. from sand at 2,423-44 feet and was drilling ahead at 2,454 feet. Merrick and others had 10,000,000 feet of gas in No. 1 Cobb, C SE SW NW, Section 5-23-2w, and also 30 bbls. of oil from sand at 2,98-2,798 feet.

In the Hewitt Field, the Magnolia Petroleum Co.'s No. 5 Schellenberger, CEL SE SW, Section 16-4s-2w, made 35 bbls. from sand at 2,318-29 feet.

In western Grady County, Stogner and others were drilling No. 2 Farwell, SW cor. NW NE, Section 23-5n-8w, at 400 feet. The Carter Oil Co. was rigging up a rotary for No. 4 McCaughtry, SW cor. NW NW, Section 26-5n-8w.

In southern Grady County, the Magnolia Petroleum Co.'s No. 1 Harris, NE cor. SE NE, Section 28-2n-5w, was good for 25,000,000 feet of gas from sand at 1,348-55 feet.

Stephens County

In Stephens County, the Skelly Oil Co.'s No. 23 Frensley, CSL NE NE SE, Section 26-1s-5w, was a 10-bbl. well from broken sands at 676-732 feet. The Pure Oil Co.'s No. 3, CSL SW SW SE, Section 35-1s-5w, was a 6-bbl. well in sand at 662-71 feet. The Midgett Oil Co. had a 10-bbl. producer in No. 9 Dickerson, SW cor. NW NW, Section 1-2s-5w, in sand at 645-732 feet. The Cosden Oil & Gas Co.'s No. 5 Oliver, CNL NW SE, Section 2-2s-5w, was making 8 bbls. from sand at 415-56 feet. The Magnolia Petroleum Co.'s No. 19 Dillard, SE cor. SW NE, Section 2-2s-5w, was good for 6 bbls. from sand at 400-32 feet. The Pure Oil Co. had an 8-bbl producer in No. 7 Hassell, NE cor. NW, Section 2-2s-5w, in sand at 665-69 feet. The same company's No. 8 Hassell, CEL NE NE NW, same section, was also good for 6 bbls. from sand at 654-65 feet. The Magnolia Petroleum Co.'s No. 8 Ingram, CEL NE NE NW, Section 6-2s-4w, was dry and abandoned at 1,588 feet.

Clark & Cowden were drilling at 700 feet in No. 1 Husbands, SE cor. Section 36-1s-8w.

Rymer & Bennett were rigging up a rotary for No. 1 Carney, NW cor. SW NW, Section 33-1n-7w. The Magnolia Petroleum Co. abandoned No. 7 Harris, SE cor. NE NE, Section 25-1n-9w, at 2,375 feet.

In Jefferson County, the Oklahoma Southern Oil Corp. was moving in a machine for No. 1 Agee, C SE NE SE, Section 13-7s-6w.

Hope has practically been abandoned in the far western areas, for a time at least, of opening up a pool of large proportions. In Roger Mills County, the Colorado Oil Co. lost the hole at 2,360 feet in No. 1 Cantrell, C NW NW, Section 32-16-22w, and plugged it.

In Beckham County, several tests were abandoned as failures. The Carter Oil Co.'s No. 3 Windle, C SE NE NE, Section 31-9n-23w, was dry at 3,549 feet; Prince & Prince's No. 1 Knight, SW cor. NE NW, Section 32-9n-23w, was dry at 2,365 feet; No. 2 Kight, SE cor. NW NW, same section, an old well, was abandoned at 2,975 feet; No. 3 Kight, SW cor. NW NW, same section, was plugged at 300 feet, and the Foster Investment Co.'s No. 2 Marshall, CNL NW SW NW, Section 32-9n-23w, was dry at 2,979 feet.

KANSAS FIELDS

(Continued from Page 55.)

could be developed in sand at 3,106-08 feet, and it may be abandoned.

The Marland Refining Co. and Alcorn Oil Co.'s test on the Shecham farm, SW cor. SE, Section 34-33-3, was drilling at 3,000 feet with the hole full of water. Waite Phillips Co.'s No. 1 Hansen, NE cor. SW SW, Section 29-33-3 had a cave-in to contend with at 2,040 feet.

In Greenwood County Buck and others have made a location for No. 1 Pixlee, NW cor. SW NW, Section 11-22-10. Hazlett and others' No. 1 Sowler, SE cor., Section 12-22-10, was a 175-bbl. well at 2,136-68 feet. Rhodes & Able's No. 3 Browning, SW cor. SE SE, Section 19-22-10 was good for 100 bbls. from sand at 2,474-79 feet. A sand at 2,294 to 2,339 feet also showed oil. R. G. Gillespie has a rig up for No. 6 Browning, NE cor. SE SE, Section 19-22-10. The Sinclair Oil Gas Co. has a rig up for No. 3 Browning, NW cor. SW NW, Section 20-22-10.

Cosden Oil & Gas Co.'s No. 2 Clopton, SW cor. SE SW Section 18-22-11 got sand at 2,080-88 feet and a hole full of 2,080-88 and a hole full of water. It got another water sand at 2,317 feet, 112 feet below the top of the lime. The well has been abandoned. The Syndicate Oil Co.'s No. 3 Clark, SE cor. SW NE, Section 28-22-11, had 200 feet of oil in the hole at 1,954-82 feet. Bradford and the Hazlett Oil Co. completed a 5-bbl. well in No. 7 Hazlett, CSL SW, Section 34-22-13, in sand at 1,785-95 feet and 1,826-89 feet.

The Phillips Petroleum Co. abandoned the location for No. 1 Hughes, C NW SW NW, Section 10-22-9.

Tom Miller and others abandoned as dry No. 1 Marshall, NW cor. SW NW, Section 27-24-9, at 2,310 feet.

The Peerless Oil & Refining Co.'s No. 1 Simpson, CWL NW SW, Section 26-22-13, was dry and abandoned at 1,904 feet. The Arkansas Fuel Co.'s No. 4 Bays, CSL SE Section 17-23-13 was dry and abandoned at 2,317 feet.

The Skelly Oil Co. & Tidal Oil Co.'s No. 13 Wick, NW cor., Section 27-22-11, made 35 bbls. from sand at 1,885-95 feet and 1,918-22 feet, both of which were shot.

Simmons and others are drilling below 975 feet in No. 1 Hampel, NW cor., Section 18-22-11. The Houston-Okla. Oil Co.'s No. 7 Sullivan, NW cor. SW NW, Section 14-24-12, was drilling below 1,000 feet. Cosden Oil & Gas Co.'s No. 13 Sullivan, NW cor. SE NW, Section 14-24-12 was spudding.

The White Eagle Oil & Refining Co. abandoned at 2,425 feet its No. 1 Browning, C NE NW NE, Section 19-22-10, and abandoned the location made for No. 2. The Phillips Petroleum Co.'s No. 3 Householder, SE cor. SW, Section 30-22-10, made a 15-bbl. well after a shot at 2,553-91 feet.

The Arkansas Fuel Co.'s No. 4 Marshall, CEL NE SW, Section 1-24-9 was shot with 100 quarts in sand at 2,301-45 feet and started at 175 bbls. John Roger's No. 1 Halverson, CSW NW SW, Section 23-24-9, was shot with 160 quarts at 2,128-52 feet and it made 240 bbls. the following 9 hours.

In Harvey County Mason & Ralston's No. 2 Hawk, CWL NW SE, 4-23-2e, got sand at 2,428-37 feet and the well produced 447 bbls. the first 24 hours.

In Ellis County James Davis and others have cellar dug for a test on the Smith farm, NW cor. Section 14-12-16w. J. Allen Harvey's No. 1 Polifka, SE cor. NW NE, Section 18-13-17w, was drilling below 2,360 feet.

MARKET CONDITIONS GOOD IN OIL CITY

OIL CITY, Pa., Aug. 2.—Considering the many changes in crude oil prices during the week and the pessimistic spirit which these caused in some parts of the oil industry, conditions in the Northwestern Pennsylvania refined district were extremely good.

Gasoline is in good shape. It is moving the best of the year and the prices are holding firm.

Kerosene is in good condition with the price holding up in fair shape.

There is a fairly good demand for steam refined, better than was the case a couple of weeks ago, although no better than prevailed during the previous week. Neutrals continue to be weak.

Wax is extremely strong. One reason for this is the fact that lots of plants in the Northwestern Pennsylvania district are not making it.

The demand for fuel oil is good.

Vice President Clark Calls on Missouri Attorney General

JEFFERSON CITY, Mo., August 2.—John D. Clark of Chicago, vice president of the Standard Oil Co. of Indiana, conferred with Attorney General Barrett in regard to Barrett's announced war on the Standard and other companies if gasoline prices are not reduced.

Mr. Clark promised full cooperation with the attorney general in the hearings to be held here August 11 before Dewitt C. Chastain, special commissioner appointed by Judge W. W. Garves of the Supreme Court. Mr. Clark said whatever books and records desired would be furnished.

The attorney general served notice on the Standard official five officers of the company would be required to be present.

Mr. Clark told Mr. Barrett the last two 1-cent cuts in the price of gasoline had been the result of similar reductions in the crude oil market. He said further reductions would only be possible when further reductions in the crude market were made. He estimated gasoline could not be produced for less than 12½ cents a gallon, which does not include freight or service charges.

LITTLE CHANGE IN OKLAHOMA MARKET

(Continued from Page 22)

change in prices over the balance of the month.

Blend prices are lower. Blenders were able to secure 7½ cents for their best grades, but prices as low as 7 cents are reported. This is entirely a development of the lower prices for straight run products.

Fuel and Gas Oils

Fuel and gas oil prices are generally firm. This is especially true since the first of the week. Buyers bought 24-28 as low as 70 cents last week, but this price on any grade above 22 seemed to have disappeared the first of the week. Stocks are accumulating in the Mid-Continent Field, the increase last week in the Mid-Continent Field, according to the Western Petroleum Refiners Association's report, being approximately 3,000,000 gallons. The increase since the first of June has been approximately 13,000,000 gallons. Buyers are staying out of the market as much as possible and it is conceded they may be able to force lower prices, especially if another crude reduction materializes. The gas oil movement is sufficient to hold prices firm.

Neutrals and Wax

There is no change in the neutral market which is weak. The write has seen quotations which vary as high as 3 cents on the same grade from companies with plants in Group 3. These prices have been further lowered in bidding for large orders. Cylinder stocks are also weak with all kinds of prices prevailing. The price margin between the better and poorer grades is smaller than usual. The wax market is unchanged.

RUSSIAN OIL KING ON TOUR OF U. S. FIELDS

NEW YORK, August 5.—Alexander F. Serebrovsky, head of all the oil operations for the Russian Government in Baku and known as the Oil King of Baku, arrived in the United States last week and left here today on a trip which will take him through all of the American oil fields and through sofe of the largest refineries. Mr. Serebrovsky organized the wrecks of about 140 private companies into one great State company known as the Azerbaijan Naphtha, or Azeneph. He has doubled the oil production of Baku from its low point of 1,920.

Mr. Serebrovsky is accompanied by Madam Serebrovsky and W. S. Mowris, of the Sinclair Consolidated Oil Corp., the latter acting as an escort on the tour of this country. It is said the tour is largely one of inspection.

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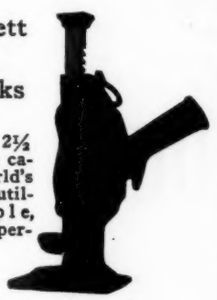

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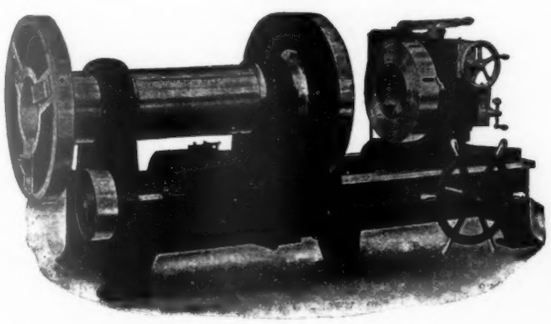

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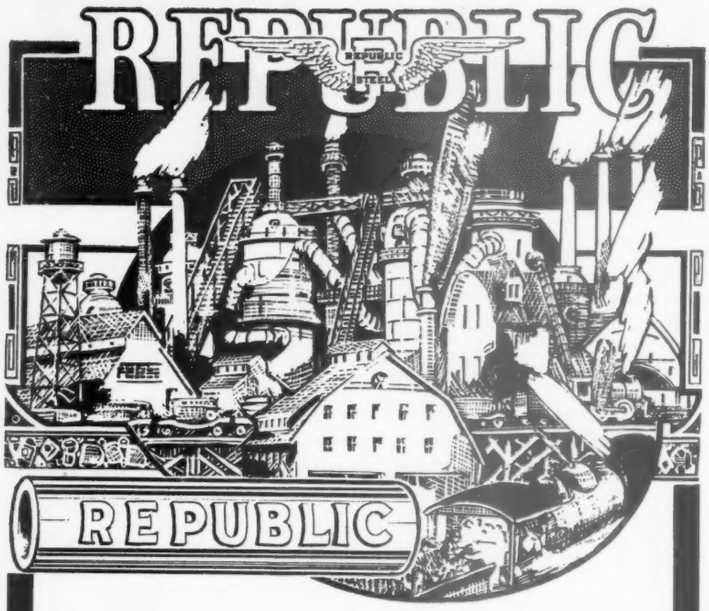

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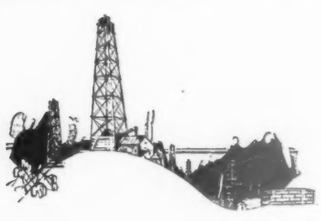

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W. KENTUCKY-TENNESSEE

(Continued from Page 60)

aging outlook for the connection of the Herbert School House Pool with the southward territory. The Leeper Oil Co., which recently finished a well on the Oat Neal farm at alnut Grove school house, is now abandoning the well, after pulling the equipment. This well at first showed up in a very creditable manner, but after several days' pumping went down to a small quantity of oil and the opinion prevails that it is an edge well. However, this is not to be taken as an indication that it is impossible to connect the pool at Herbert with another producing area, and it only remains to be seen in which direction the oil strata extends. It is said one or two big companies are planning to drill several test wells in the vicinity of the Neal well in the effort to get better located on the structure.

In the Herbert school house section three completions have been recorded for the week. The Panther Creek Oil Co. has finishd No. 6 Bob Miller as a 10-bbls. pumper; the Pennsylvania-Indiana Oil Co., the Dearborn Oil Co., and the Leeper Oil Co. completed their No. 3 on the 16-acre Chas. Taylor farm, which they own jointly in fee, for a 12-bbl. pumper in the Barlow sand. In the same section, the Dearborn Oil Co.'s No. 2 Bud Barker pumped 10 bbls. from the Barlow sand. The Pennsylvania-Indiana Oil Co. is spudding in No. 8 Virgil Miller and the Kentucky Oil Co. was drilling at 400 feet in its test on the Burdette farm, near the Hardin Brown well recently completed by H. F. Gibson. The Leeper Oil Co. is moving a rig to the Garrett farm, west of the Amanda Stewart leases, recently acquired from Joe S. Young, of Lawrenceville, Ill., and will drill a well about eight feet from No. 1, which was drilled nearly two years ago and ruined before it was put pumping.

The Leeper Oil Co. is moving a rig to the Collier farm, at Collier station, south of Whitesville, for a test and work will be started early the coming week.

The Knottsville section of Daviess County will get another test during the next few weeks. Courson, Randolph & Stevenson, who are operating on the Abe Howe farm at Herbert school house, have acquired a big block of acreage west of the well drilled by E. M. Treat & Co. on the Frank Hidgon place and are planning to move a rig to the location at once and commence drilling.

Reports from the pipe line runs from the Herbert and Pellville Pools for the month of June showed that upwards of 10,000 bbls. were transported, equaling the high water mark of the month previous. However, local producers are expected to curtail their production this month.

Allen County Completions

There were six wells completed in Allen County for the week, 5 of which made small producers, and 1 dry hole. In the southwest district, H. A. Kiser got a 2-bbl. pumper in No. 4 Travelstead at 290 feet, approximately 30 feet below the black shale; the Kentucky Developing Co. finished a 5-bbl. starter in its H. G. Rather at 492 feet after a 15-quart shot. Shale was from 444 to 456 feet. Foster and others' No. 11 Barbee is good for 3 bbls. at 317 feet, after a 20-quart shot. The Central Producing & Refining Co.'s No. 13 Barbee heirs, was classed as a 2-bbl. pumper after a 10-quart shot at 270 feet. On the Harris farm, Peerson & Neeley's No. 1 made 3 bbls. on test at 367 feet.

The Kenmont Oil Co.'s No. 17 W. T. Keen, in the Keen Pool, was dry and abandoned at 380 feet.

Warren County Wells

Development work is going on in a small way in Warren County Fields and as soons as wells drilling are completed, operators are shutting down and claim that no new work other than is a necessity will be started.

In the McLemore-Gillespie-Price Pool, southwest of Bowling Green, the Baker-Jones Syndicate got a 25-bbl. producer after deepening No. 2 on the Gillespie 103 acres, to a total depth of 1,076 feet. Sand from 1,029 to 1,076 feet was shot with 100 quarts of nitro.

In the Davenport Pool, the Westland Oil Corp. secured its 25th straight producer on the C. A. Keller lease, on location 41. The well started off at 12 bbls. from a depth of 1,117 feet, where it was shot with 40 quarts.

Makeever Brothers, of Boston, Mass., got a 40-bbl. starter in No. 10 Young at 704 feet; sand from 685 to 700 feet was treated to a 60-quart shot. This property lies 10 miles northwest of Bowling Green, in the Sandidge Pool, and is one of the best shallow sand leases in the entire Western Kentucky Field. Makeever Brothers have drilled in the neighborhood of 100 wells in this area, all but two of them being producers. N. Garland, field manager, reports No. 11 Young down 532 feet and drilling.

The recent completion on the Biddle lease, owned by the Cadet Oil & Gas Co. in a sand below the shale, a new sand for that district, has stirred up interest and when the price of crude gets anywhere near reasonable, a large number of the shallow wells, in the Mississippi lime, will be deepened to the Coniferous lime, below the shale.

Barren County Activity

The most active county in the entire western Kentucky district is Barren, where 41 strings of tools are under way. Fifteen are about ready to drill in the coming week. The Emery-Moore Pool, west of Glasgow, is most active. It is in this area the producers are looking for one of the best pools in the field as the productivity of the old wells and their "sticking ability" is attracting more than passing attention. The sand ranges from 10 to 25 feet in thickness and in most cases is given a light dose of nitroglycerin to help the output.

Completions

In the Emery-Moore Pool, Fred Moore of Bowling Green, Ohio, picked up a 14-bbl. producer in a sand from 495 to 505 feet, after shooting with 30 quarts in his second venture on the McCubbin property. The well was drilled to a total depth of 530 feet. Casing was set at 200 feet. On the Mann lease, J. G. Emlinger, former owner of the famous Mitchell 27-acre lease in Allen County, got a 10-bbl. pumper in No. 1 at a total depth of 578 feet. Casing was set at 185 feet. The shale was found at from 335 to 387 feet and the sand from 562 to 570 feet, shot with 30 quarts. This completion served to widen the pool about one-quarter of a mile to the north and east. No. 2 is spudding; Maxey & Kople's No. 7 Childress, in the same district, is a 15-bbl. producer from 464 to 474 feet. Casing was set at 120 feet.

A wildcat, drilled by F. A. Brendall, on the James lease, 20 miles northeast of Bowling Green, near Merry Oaks, made 1 bbl. on bailing test at 670 feet, after a 20-quart shot. Casing will probably be pulled and the well abandoned.

In the Hiseville district, 10 miles north of Glasgow, the South Saint Paul Oil & Gas Co.'s No. 3 Vincent is classed as a 6-bbl. well at 628 feet. Casing was set at 300 feet.

Cumberland-Monroe Counties

During the past week in the Cumberland-Monroe Counties Field two new wells were started; the Kanawha Oil Co. is spudding on the Widow Coop farm, on Williams Creek, adjacent to the same company's deep wells, and a local syndicate has decided to drill on the Gilbert lease, at Brush Creek. This well, if a producer, will open up the old Brush Creek Field by an extension to the southeast. Structurally, the location seems to be about as far on the southern side of the structure as the old pool is on the northern side, and the southern side has as good a collection area as the northern. A well there would cause a scramble for leases in that neighborhood, as the old field was very promising, although it was but the remnant of the field in the same place of 20 years ago, consisting of from 15 to 20 wells and a refinery.

Reports on the Short well, a Combest & Morris, at Galloway Creek, State that it has been plugged back to the Sunnybrook sand. It is estimated it will make

20 bbls. The Atla Oil Co.'s test on the Thomas farm, on broad branch of Crocus Creek, as reported abandoned for the present.

Col. Less Combest and associates are down about 503 feet in No. 1 on the Huddleston-Payne tract, on Sulphur Creek. If this test proves to be a producer it will make the Sulphur Creek area look like one of the most promising districts in the county. The Judio Development Co., Inc., has made locations for two new wells on its J. B. Hume leas in the Judio Creek area, and also intends to do some extensive work on its leases on the big Judio Dome as soon as market conditions improve. The Judio Dome is the largest yet mapped out in the field and it is almost a certainty it will produce some good wells. It was down to the northern slope of this structure, too low down on it to be called on the anticline, that the Graves well came in in 1902 for 3,500 bbls., burned for 11 days before it could be placed under control and tested (the figures given are after the control was gained) which was August 1, and as late as December 15, 1902, was making around 310 bbls. naturally. What this dome will do in the future, when drilled, is keeping the knowing ones on tiptoe with expectancy.

The well of the Wilcox Brothers on the Bob Phares, at Bear Creek, was drilling at 1,122 feet, 82 feet below the Pencil Cave and in the top of the Modoc sand. If no production is found in the Modoc the test will be driven to a depth of 250 feet below the Cave to the Heard sand. The fishing job at the F. F. Smith, of the Oil Fork Development Co., in Bow Hollow, was brought to a conclusion the first of the week and drillers are now making excellent time. The test was down 750 feet, 102 feet below the Pencil Cave, in the Modoc sand. If this sand fails to materialize the hole will be plugged back to the Lower Sunnybrook, at which horizon a good showing was encountered and shot.

AMERICAN RIGHTS IN RUMANIA ARE MENACED

(Continued from Page 24)

even those on the basis of rights acquired from the land owners, all installations revert to the State. Certain provisions state that on the expiration of a concession the State will compile a program of operations for the last five years and the concession ma ybe granted to the old concessionee on the basis of a new schedule of work. The law provides that all existing mining exploitations as well as those for industrialization and commercialization are subject to the law of mines. The regime for the exploitation of gases is stipulated, in accordance with which the ministry made may compel the pooling by regions of exploitation for the collection and industrialization of gases, while if the concession taken from the State for crude oil should in drilling come across a strata of gas, these gases may be exploited only by the State in accordance with the law of commercialization. It would seem to be clear that rights acquired, taken from private persons, will be respected. Other provisions of the new law provide that the ministry has the right to group together lands on which several concessions exist in order to insure rational exploitation. The State has the right on the granting of a concession to claim either a royalty which progressively increases up to 35 per cent or the formation of a new mining company in which the State receives shares for its land (right to the subsoil) in accordance with the law of commercialization.

DEATH OF OWEN MURPHY

PITTSBURGH, Pa., August 2.—Owen Murphy, retired operator, and one of the best known oil men in the Eastern fields, died recently at his home in Washington, Pa. Mr. Murphy had been in poor health for a number of years. He and two of his brothers came to the Bradford fields during the exciting days and entered the contracting business and later engaged in the producing business, going to the Sistersville, W. Va., Field when the field was young. They were very successful and accumulated large fortunes. For the past 30 years, Mr. Murphy had resided in Washington. On February 14, 1893 he married Miss C. Ritchie. Besides his widow, he leaves three daughters, Mrs. R. K. McConnell, of Pittsburgh; Mrs. Elmer Panner of DeNoya, Okla., and Mrs. G. Pearce of Saginaw, Mich., and two brothers, John B. Murphy, of Washington, Pa., and William of Rome, N. Y.

Craig Well Flowed 26,900 Bbls. First Week—Water Showing

CRAIG, Colo., Aug. 2.—The Tex Production Co. and Transcontinental Co.'s test 14 miles south of Craig, Moffat County, which was opened on Thursday, July 24, flowed 4,700 bbls. the first 24 hours and by Saturday, July 26, it was down to 4,000 bbls. On July 28 it flowed 3,625 bbls.; July 29, 3,349 bbls. and on July 30, 3,180 bbls. It produced approximately 26,900 bbls. in a week.

A 4 per cent fresh water shownig was noted soon after the well was opened up and was still in evidence on Thursday of this week.

The well is on a considerably higher elevation than the storage tanks of the Prairie Oil & Gas Co. at Craig and the oil flows by gravity to the tanks through a 4-inch pipe line. However there is a pump station en route. The Prairie has two 35,000-bbl. tanks completed; two in the course of construction, and is preparing to build two more.

It will be a month or thereabouts before the second well in the field is completed.

Each of the various tests in the field is being drilled on a separate structure. The producing well occupies what is believed to be the top of a structure, about three-quarters of a mile in extent.

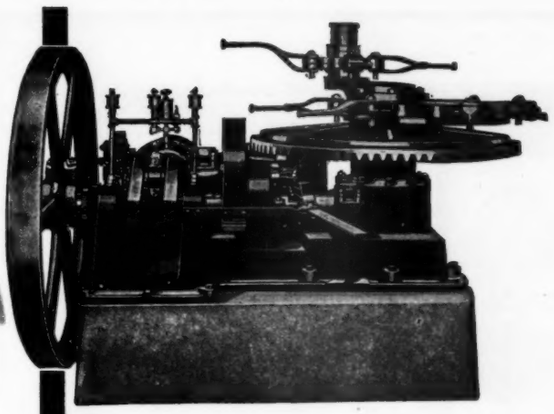
An Oklahoma oil man who watched the Texas-Transcontinental well for two hours after it was opened remarked that if it was located in Oklahoma he would expect to see it on the swab in 10 days. There was very little gas, a volume of about 200,000 feet a day, and he expected the water pressure under which the well is flowing would decline rapidly.

ROYALTIES TOO HIGH TO TEST DRY PINEY

WASHINGTON, August 2.—At the hearing on behalf of the Utah Oil Refining Co. and the Cretaceous Oil Co., for reclassification or redesignation of the Dry Piney Field in Sublet County, Wyoming, held by the Interior Department, the Utah Co. was represented by John Howard, president, Salt Lake City, Utah, and the Cretaceous Oil Co. by Judge R. R. Rose, of Casper, Wyo.

The land is about 66 miles from the Union Pacific Railroad line in western Wyoming. The companies in arguing for their petition asserted that three wells have been drilled to depths of 600 feet, 1,000 feet, and 1,300 feet, respectively. The 600-foot well, in an upper unnamed sand, has produced, according to their statements, not exceeding 1 bbl. per day of 33 per cent gravity oil. The 1,000-foot well has produced ½ bbl. of oil per day. The 1,300-foot well has produced no oil, and it is the contention of the companies that no commercial oil exists in the upper sands. There is a possibility that commercial oil exists in deeper sands at depths of 3,500 to 4,500 feet, respectively.

It is claimed that a test of the alue of structure for oil production can not be secured under high royalties, but that if the structure is resignated so as to make it prospecting territory, test wells may be drilled to the deeper sands. The showing submitted by the companies consisted of maps and affidavits. These have been turned over to the Geological Survey for further investigation.



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Long or Short terms

Late News From the Fields

OKLAHOMA

A late report on the McCaskey & Wentz' Slick sand gusher, in Section 34-35-1w, Tonkawa Field, mentioned elsewhere in the main Oklahoma correspondence, gave the production at 240 bbls. an hour. On Monday it was reported to have gauged 4,740 bbls. The well of the Blackwell Oil & Gas Co., in Section 34, also mentioned in more detail elsewhere, increased its production to 150 bbls. an hour after drilling 2 feet deeper.

The Otoe Pool, in western Pawnee County, shows two more good wells in the Wilcox sand. The Magnolia Petroleum Co.'s No. 3 Alteffer, NE cor. Section 5-23-3, started at 882 bbls. a day from sand at 4,051-85 feet. The Marland Refining Co.'s No. 3 Miller, SW cor. SE NW, Section 33-23-3, was good for 660 bbls. the first 24 hours at 4,069-71 feet.

In the Cromwell Pool, the Cosden Oil & Gas Co.'s No. 2, SW cor. SE NW, Section 15-10-8, has increased its production to 65 bbls. an hour.

The Roxana Petroleum Co.'s test on the Cullen farm, C NW NE NW, Section 12-8-8, Hughes County, got sand at 3,400 feet and 50,000,000 feet of dry gas.

Thomas B. Slick's No. 1 Sand, C SW SW SE, Section 35-10-9, Okfuskee County, had 2,500 feet of oil in the hole and was shut down for tankage. The top of the sand was found at 3,330 feet, total depth.

In the Burbank Pool, Osage County, the Phillips Petroleum Co.'s No. 8, SE cor. NE SE NW, Section 23-27-5, was shot with 140 quarts and made 400 bbls. the first 24 hours. The same company's No. 11, NW cor. SE NW NE, Section 35-27-5, was shot with 110 quarts and made 100 bbls. Both were old wells. The Mid-Kansas Oil & Gas Co.'s No. 10, SE cor. NE SE SE, Section 35-27-5, produced 40 bbls. in 24 hours after a 20-quart shot.

Northern Creek Completions

In northern Creek County, a number of completions were recorded, including J. B. Grieves' No. 1 Grayson, NW cor. SE SE SW, Section 12-19-8, oil at 2,127-55 feet, shot with 80 quarts, 15 bbls.; Lassen Brothers' No. 1, SW cor. NW, Section 13-19-8, sand at 1,570-88 feet, 55 bbls. naturally and a 2,500,000-foot gas production.

In Okmulgee County, the Waite Phillips Co.'s No. 2 Richards, NE cor. SE SE, Section 14-15-11, had a 17,000,000-foot gas production at 2,278-84 feet. The Shaffer Oil & Refining Co.'s No. 1, SE cor. NE SE, Section 17-15-11, got sand at 3,046-49 feet, and the hole filled 1,000 feet with oil. Ferris & Potter's No. 2 Cousins, NE cor. SE NE, Section 18-15-12, made 30 bbls. naturally from sand at 2,207-11½ feet. There was some water showing. Ted Savoie's No. 1 Smith, CNL SW, Section 24-15-12, found sand at 1,554-95 feet. It made 20 bbls. a day after the shot.

Papoose Pool

The Papoose Oil Co.'s No. 5 Alexander, C NW SW SE, Section 4-9-9, Papoose Pool, flowed 1,805 bbls. the first day at 8 feet in sand found at 3,325 feet.

The Tidal Osage Oil Co.'s No. 2 Holt, C SE NW NE, Section 9-9-11, was pumping 50 bbls. a day from sand at 2,940-97 feet.

The Cosden Oil & Gas Co.'s No. 1 Mission, C NE SW SE, Section 7-7-8, Hughes County, was abandoned as dry at 4,359 feet. The Producers & Refiners Corp.'s No. 1 Jacobs, NW cor. SE NE, Section 14-7-8, was abandoned at 1,482 feet.

Smith an dothers' No. 1 Stringer, C NE NE SW, Section 34-5-6, Pontotoc County, was flowing 30 bbls. a day through 2-inch tubing from sand at 1,630-35 feet.

The Humble Oil & Refining Co.'s No. 4 Ploughman, NE cor. SE NW, Section 25-1n-9w, Duncan Field, Stephens County, was dry and abandoned at 2,330 feet.

The Wilcox sand pool opened by the Red Bank Oil Co., about 8 miles west of Independence, Montgomery County, Kansas in July with a 3,000-bbl. initial producer was made to look better on Monday when one of the offset wells started at 30 bbls. an hour from the top of the same sand. The Red Bank Oil Co. owns the second well. The first of the brace of good ones was drilled in the SW cor. SE Section 28-32-14. It is now making 1,600 bbls. a day. The second well is on the Haynes farm, W half NW NW, Section 34-32-14. The Red Bank is also drilling one in N half NE, Section 33-32-14, and Homer T. Lamb, president of the Red Bank Oil Co. has one in NE NW, Section 33-32-14, showing oil from the top of the sand.

GULF COAST

HOUSTON, Tex., Aug. 4.—What gives promise of another pool—the second within a week—interests coastal operators. Late in the week the Vacuum Oil Co set 100 feet of strainer in No. 2 Miller, in the Lockport section, near Lake Charles, Calcasieu Parish, south Louisiana, at 3,810 feet. The well is reported making from 100 to 150 bbls. by heads, 23 gravity oil. Locations have been made for No. 3, 1,500 feet west and No. 4, 1,500 feet east. The well is the seventh drilled by the company in a swamp from which gas bubbles at various places.

The Rycade Petroleum Co.'s No. 1 Wisdom, east of Damon Mound Pool, which found dome formations at 630 feet and drilled 35 feet into gyp, is now shut down, having lost returns in a cavity.

Luling Field

On the Caldwell County side of the Luling Field, the United North & South Oil Co. drilled in No. 2 Maggie Moore and it started at 3,000 bbls. initial flow.

Laredo Districts

Tank car shipments from the Laredo Pools total 1,020 cars during July, or approximately 250,000 bbls. This is the record for the district. The Magnolia Petroleum Co. shipped 252 cars to Aransas Pass, barging 40,000 bbls. to the refinery at Beaumont. The Texpata Pipe Line Co. shipped 352 cars to the same port for the Sun Oil Co. on its contract calling for 950,000 bbls. Tankers loaded 50,200 bbls. for New Jersey refineries and 40,000 bbls. for the Sun Oil Co.'s refinery at Marcus Hook, Philadelphia.

MEXICO

By George Blardone

TAMPICO, Mex., Aug. 2.—There have been 15 wells completed in the fields of Mexico during the past week. Of these two were in the south fields, of which one was a 500-bbl. stripper in Lot 226 Amatlan, at 1,835 feet subsea level. The other one was a distinct failure, being drilled by La Corona Petroleum Co., in San Isidro, south of the Tuxpam River, and, it might be said, to the general east of the Alamo Pool of the Penn Mex Co.

Of the failures in the northern fields, the total is 11. Two completions were in the pay column but they added only 1,300 bbls. initial daily production to the balance in favor of the production end.

One of the completions in the northern fields was No. 1 Manuel, in the State of Tamaupilias which at 2,500 feet, has been quit by its contractors as a dry hole. This result has been discounted for some time.

PRESIDENT B G. DAWES' VIEWS

Curtailment of new drilling has placed the industry in a stronger position than at any time in its history, according to B. G. Dawes, president of the Pure Oil Co. Mr. Dawes said that overproduction was a temporary condition and that a surplus of oil "does not seriously affect financially strong and well-managed companies. It should not be forgotten that oil producers and refiners must guard against shortage of oil, which means higher prices for consumers, as well as protect the industry against overproduction, which sometimes means profitless prices for producers.

NORTH TEXAS MARKET TREND WAS DOWNWARD

FORT WORTH, Tex., Aug. 2.—The refined oil market in the North Texas district continued a downward trend during the past week, with gasoline products off one-four of a cent from last week. Fuel oil slumped 5 cents a barrel. Kerosene and gas oils were weaker in demand, but maintained last week's prices, the market as a whole showed a distressed condition. An order for 40,000 bbls. of fue loil, to be delivered to their plants at El Paso, was placed with refineries at Wichita Falls, by the American Smelting & Refining Co., the only sale of importance reported.

New Navy gasoline developed a bearish market, the product sold all week at 7¾ cents, ¼-cent off from last week. Buyers were scarce.

Reflecting the weakness of the gasoline market, 64-66, 375 end point was generally quoted at 9¼ cents, a few sales early in the week was made at 9¾, and some refiners were holding for the higher price at the close of the week.

Natural gasoline was the only light oil to maintain last week's quotations; it was steady to firm, with the product scarce and the demand slightly stronger at the week end. Grade A 7¼ cents, Grade B, 6¾ to 7 cents; Grade C, 6½ to 6¾ cents.

The demand for fuel oil was normal compared with pervious weeks. Orders were placed at both 70 and 75 cents a barrel, sellers' cars, the order placed by the American Smelting & Refining Co. helped in no small degree to stabilize a depressed market.

Kerosene held steady, 4 cents, a few buyers offered 3¾ cents but failed to get their orders accepted for water white. Pure white was steady at 3¾ cents.

Gas oils are scarce, but little obtainable at any price; 2½ to 2¾ cents was the standard quotation. Only car lot orders will be accepted.

GULF COAST

(Continued from Page 102)

Drilling operations have fallen off again, but The Texas Co. is figuring on two more locations on its Allen acreage and Danciger Brothers on three more. The United North & South Oil Co. has announced some 27 more wells will be drilled, most of them on the Guadalupe River side of the field.

Interest there now is in the Walhunda Oil Co.'s No. 1 Jones, 1 mile northwest of production in Guadalupe County, drilling in hard formation around 1,800 feet. Casing was set at 1,754 feet. The Solomon and others No. 1 Walker, formerly the Big Gusher Oil Co., is reported good for 20 bbls. at 2,445 feet, 45 gravity oil. The hole will probably be deepened in the hope of increasing the production. It is located 1½ miles east and south of production in Caldwell County.

On the Guadalupe County side, the United North & South Oil Co. has derricks up or rigs in for Nos. 11-A, 12-A and 13-A McKean, 8-A McKean Brothers, 9-A and 10-A 3 Shanklin and 2 Roberts. The Magnolia Petroleum Co. is starting No. 10 Schubert. On the Caldwell County side, the United North & South Oil Co. is drilling Nos. 2 and 7 Moore & Anderson and others No. 2 Fields.

Rockdale-Minerva

In the Rockdale-Minerva shallow sand districts in Milam County, the Lee & Phillips Co.'s No. 3, west of Rockdale is making 50 bbls. at 1,100 feet. J. C. Wadsworth and associates, of Houston, have a location there. The Roundtree & Lee Co. is drilling No. 7 Roundtree and the National Refining Co. No. 1 Nelson. Several of the drilling rigs are temporarily shut down in that section of Milam County.

Calliham, McMullen County

In the Calliham Field, the Three Rivers Oil Co.'s No. 4 Stitz is a 50-bbl. producer. The Southern Natural Gas Co. has started drilling No. 10 Lark.

OKLAHOMA REFINERY CRUDE RUNS ARE LESS

(Continued from Page 23)

White Eagle Oil & Ref. Co., Augusta	7,500	5,000	5,750
Southern Missouri Group—			
Interstate Refineries, Inc., Centropolis	1,500	Shut down	Shut down
Marshall & Co., Sheffield	2,500	Shut down	Shut down
Wilhoit Refining Co., Joplin	1,500	950	800
Total	138,600	73,550	68,800

REFINERY OPERATIONS IN NORTH CENTRAL TEXAS
(Plants which have been in operation during the past year.)

Name and Location—	Daily Capacity	Runs August 1	Runs July 1
American Oil Corp., Pioneer	2,000	400	300
American Refining Co., Wichita Falls	7,000	5,500	4,500
Boner, H. E., Burkburnett	500	Shut down	Shut down
Boardman Oil Co., Wichita Falls	750	250	200
Buffalo Refining Co., Sherman	500	300	300
Clayton Oil & Ref. Co., Dallas	4,500	2,500	2,750
Cross (H. H.) Refining Co., Corsicana	2,500	1,200	800
Crystal Petroleum Co., Burkburnett	1,000	Shut down	Shut down
De Leon Refining & Pipe Line Co., De Leon	1,000	250	300
Griswold Oil Co., Wichita Falls	3,000	2,500	2,500
Gulf Refining Co., Fort Worth	15,000	6,000	6,200
Humble Oil & Ref. Co., Burkburnett	1,500	1,500	1,200
Humble Oil & Ref. Co, Hearne	6,500	6,500	6,500
Interstate Gasoline Products Co., Iowa Park	2,000	Shut down	Shut down
Interstate Refineries, Inc., Ranger	2,000	Shut down	Shut down
Iowa Park Prod. & Ref. Co., Iowa Park	2,000	1,800	1,500
Keystone Ranger Refining Co., Wichita Falls	2,000	Shut down	Shut down
Lone Star Refining Co., Wichita Falls	4,000	Shut down	Shut down
Miller Petroleum Co., Wichita Falls	3,000	2,200	2,500
Magnolia Petroleum Co., Fort Worth	12,000	5,600	5,500
Magnolia Petroleum Co., Corsicana	10,000	3,200	3,000
Megargel Refining Co., Megargel	1,000	500	500
Mexia Oil & Ref. Co., Mexia	600	100	100
Noble Oil & Gas Co., Burkburnett	5,000	3,200	3,000
Olney Oil & Ref. Co., Olney	1,000	250	500
Oriental Refining Co., Dallas	6,000	800	600
*Oriental Refining Co. (Tr'nity), Dallas	5,000	2,500	3,000
Orient Petroleum Co., Wichita Falls	2,000	1,000	1,200
Paris Refining Co., Paris	500	100	100
Panhandle Refining Co., Wichita Falls	4,500	3,500	3,500
Prairie Refining Co., Grand Prairie	500	Shut down	Shut down
The Petroleum Corp., Electra	2,000	1,000	800
Primrose Refining Co., Wichita Falls	1,500	1,000	800
Producers Refining Co., Gainesville	5,000	4,500	4,500
Rinehart Petroleum Co. (Bankers), Iowa Park	2,000	Rerun	Rerun
Skelly Oil Co. (formerly Nortex Ref.), Burkburnett	2,000	Shut down	Shut down
Star Refining Co., Fort Worth	1,500	500	600
State Refining Co., Dallas	1,000	Shut down	Shut down
Sunshine State Oil & Ref. Co., Wichita Falls	2,500	900	1,000
Tidal Western Refining Co., Burkburnett	2,000	1,000	1,750
The Texas Co., Dallas	15,000	7,500	8,000
Texhoma Oil & Ref. Co., Wichita Falls	7,000	5,500	5,800
Tiger Refining Co., Breckenridge	1,500	Shut down	100
Transcontinental Oil Co., Fort Worth	5,000	3,200	2,500
Travis Refining Co., Burkburnett	1,000	200	200
Waggoner Refining Co., Electra	3,400	2,500	2,250
White Eagle Oil & Ref. Co., Fort Worth	5,000	3,600	3,200
Total	237,350	83,050	84,050

*Operated by Magnolia Petroleum Co.

REFINING OPERATIONS IN ARKANSAS
(Plants which have been in operation during the past year.)

Name and Location—	Daily Capacity	Runs August 1	Runs July 1
Arkansas Oil & Ref. Co., Fort Smith	1,000	Shut down	Shut down
Cross Refining Co., Smackover	2,000	1,500	1,500
Continental Oil & Gas Co., Texarkana	750	400	Shut down
Four States Refining Co., Texarkana	2,000	200	Shut down
Grison Refining Co., El Dorado	750	Shut down	Rerun
Home Oil & Ref. Co., Camden	750	750	350
Hot Springs Refining Co., Hot Springs	500	Shut down	225
Houston Oil Co., Camden	5,000	Bldg.	Bldg.
Jones & Co., R. C., El Dorado	1,000	Shut down	Shut down
Kettle Creek Refining Co., Pearson	4,000	3,500	3,000
Lion Oil & Ref. Co., El Dorado	12,000	6,500	6,200
McMillian, Fehiman & Oliver (operating New Ark Refining Co.), El Dorado	1,500	Shut down	Shut down
Ouachita Valley Refining Co., El Dorado	1,500	Rerun	900
Pine Bluff Refining Co., Pine Bluff	2,000	600	Shut down
Root Refineries, El Dorado	3,000	2,000	1,800
Shippers Petroleum Co., El Dorado	700	Shut down	Shut down
Union Pipe Line & Refining Co., El Dorado	4,000	700	Rerun
Total	41,700	16,150	13,975

REFINING OPERATIONS IN NORTH LOUISIANA
(Plants which have been in operation during the past year.)

Name and Location—	Daily Capacity	Runs August 1	Runs July 1
Caddo Central Oil & Ref. Co., Shreveport	3,500	3,500	3,000
Caddo Central Oil & Ref Co., Shreveport	8,000	5,000	5,000
Louisiana Oil Refining Corp., Shreveport	10,000	10,000	8,000
Louisiana Oil Refining Corp., Bossier	3,000	800	800
Red River Refining Co., Crichton	1,800	Shut down	Shut down
Shreveport Producing & Ref. Co., Shreveport	5,000	4,000	4,000
*The Texas Co., Ardis	5,000	4,000	4,000
Total	35,000	27,300	24,800

*Topping.

TREATING DISCOLORED GASOLINE DESCRIBED

Continued from Page 90)

colored gasoline. I do not advocate the use of fire stills, primarily on account of the fire hazard, and again, the use of fire stills increases the expense of insurance. To my notion, the steam still should be of capacity large enough to make easy operation; it should be protected with pressure relief valve and vacuum cup, and the vapor line from the still should be of large capacity to prevent pressure accumulation on the still. Also, I do not advocate the use of automatic devices on the still. At best, they are bound to get out of order when least expected and we find in practice that operating the still the same as distillation apparatus (by that I mean, slowly and carefully) we get best results.

In operating the still for drip gasoline, we operate at a still pressure of 3 to 5 pounds; a temperature of not less than 225 degrees F. nor more than 250 degrees F. and distill at a rate of 50 gallons an hour. The tank we make in is maintained at a pressure of zero gauge to 1 1 to 3 inches of vacuum. The gasoline entering the still is controlled to same rate as gasoline distilled off. If this is not convenient, we simply charge the still with several hundred gallons and distill it off at above mentioned rate.

for your information, I submit a distillation report on undistilled drip; distilled drip and the residue, or still bottoms.

Undistilled Drip—	
Baume	66.7
Initial	90
End point	332
Recovery	97.2%
Distillation loss	2.3%
Distilled Drip—	
Baume	66.4
Initial	94
End point	330
Recovery	96.5%
Distillation loss	3.0%
Still Bottoms—	
Baume	53.5
Initial	170
End point	486
Recovery	94.9%
Distillation loss	1.4%

The still bottoms is of such small quantity, we use it to wash rags. At one plant under my supervision, where the still bottoms quantity is large enough, we charge it into our still at absorption end and dispose of it in that way. I might add that we notice that the drip gasoline leaves a larger amount of still bottoms in summer months than in winter months.

Where the distilling of drip gasoline is comparatively easy, there is a difference in distilling the off-colored gasoline made in the plant. You can readily appreciate the difference in the two products. I have referred to the handling of the still as being the same as operating distillation apparatus in a laboratory—that is, carefully and slowly. In distilling the discolored gasoline made, great care must be taken to prevent pressure rise caused by distilling too fast. Temperature must be applied slowly, or if desired temperature is constant, the gasoline must be charged into still slowly.

Industry Operating At a Loss Declares Chairman Sinclair

NEW YORK, Aug. 5.—In a statement to stockholders of the Sinclair Consolidated Oil Corp., Chairman H. F. Sinclair said:

The ommission of the common dividend was due to the desirability of conserving cash during the present unsettled condition of the industry as a whole. This unsettled condition is due to overproduction of crude oil, accumulation of excessive stocks of refined products, and recurrent public agitation dictated in part by the selfish motives of demagogues and in part by the sincere criticism of those who do not understand the fundamental principles underlying the petroleum industry.

The first two of these problems will find their own solution, but the third can be solved only by the public. An income statement of all petroleum operations in America combined undoubtedly would show that the industry is operating at a loss. Demagogues are seeking to hold the industry to that level or force it even lower, and so long as the public gives them sympathetic, or even passive encouragement, they will continue more vigorously to attack not only the petroleum industry, but all other forms of business. Their course leads toward widespread unemployment, general weakening of the country's credit structure, lessened production of the necessities of life, poorer values and ultimate disaster to all American industries.

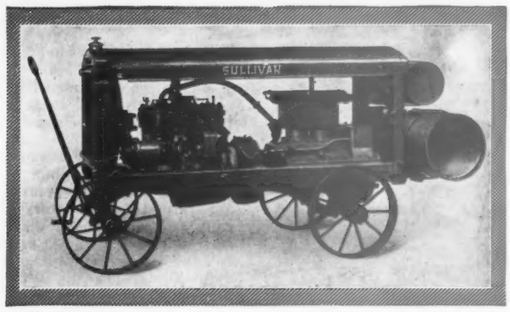
The company's crude oil production is being well maintained during the prolonged period of general overproduction and should respond readily to aggressive drilling. The time will come when production throughout the world will be urgently needed.

In the last eight years the company's expenditures in obtaining and developing prospective foreign oil lands (exclusive of Mexico) through purchase or lease, or through concessions and concessionary contracts, have been less than 3 per cent of the total capital expenditures.

The company's cash investment in the Sinclair Crude Oil Purchasing Co. is $30,000,000. The crude oil supplies represented by this investment were not bought for speculation. Prices of crude oil may go up or they may go down. A paper profit or a paper loss is unimportant. For any large petroleum organization a large storage supply of crude oil is an essential to permanent success as well-equipped refineries. It is one of the most important bulwarks of the enterprise. No one can predict when it will be vitally needed, but it is there for use when conditions and prices justify.

The company's refining plants have been brought to a high state of efficiency. A 10,000-bbl. unit at Houston was added and placed in operation in June, and the Marcus Hook plant should be ready for capacity operation by the end of the year.

AIR POWER ON WHEELS



A New Sullivan 103-Ft Portable Compressor

This new Sullivan portable compressor meets the popular demand for a 100-ft. unit for many oil field jobs.

Try it for running Sullivan Rock Drills, for tank or building construction, concrete busting, operating portable hoists, sand blasting, paint spraying, etc. Its compactness and reliability will stand you in good stead.

A larger, 170 ft. gas engine driven compressor is also built, also a 121 ft. unit run from a Fordson.

Type—WK-311.
Displacement—103 cu. ft.
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Drive—Buda 4 cyl. 4 cyc. engine.
Mountings—Steel wheel, rubber tire wheels, trailer, or skid.
Ground area—9½x4½ ft.
New Bulletin, 1577-L.

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NEED FOR EDUCATIONAL CAMPAIGN IN COMBATTING LA FOLLETTISM

By Charles E. Kern

WASHINGTON, D. C., Aug. 4.—The idea of cobatting LaFolletteism with an educational campaign involving widespread publicity that will reach a large percentage of the voters who will elect a President and a Senate and House of Representatives in November, is a hard thing to put over on the people who should see it at a glance. Congress, much more than the president, who will preside over the executive branch of the Government, will determine the kind of national legislation that is to be enacted. Never before in the history of this country have political lines been so loosely drawn as at present at the beginning of a campaign of tremendous interest to all business activity and especially to the producer, refiner and distributor of petroleum.

There is a lot of what is called "independent" thinking. The word of leaders in the field of politics, appealing to party fealty is weighing very lightly upon many people who in past campaigns have looked to their party organization for guidance. Their ideas may not be based upon either knowledge or sound reason, but men and women go wrong with as great enthusiasm as they go right. As a rule they are largely guided by the influence of a full dinner pail, whether that means good wages or obtaining cheap products.

Gasoline Irritation

Unfortunately for the oil producer struggling with his numerous problems, while there are something like 20,000,000 men and women who make frequent visits to automobile service stations, each visit is accompanied by some irritation because they thing they are paying one or two cents more per gallon for their motor fuel than they should have to pay if the petroleum industry were controlled by some sort of legislation. Their ideas are entirely vague and so impracticable that none of them could make a definite statement of what kind of legislation ought or could be enacted to give them their gasoline at a cheaper price. Like a discontented and sick man they are ready to reach out for any quack nostrum that any glib talker may offer them. They are looking for somebody who claims to have a remedy. They do not think it worth while to understand the remedy. All they want is to swallow something with the hope that it is the right thing and with the belief that in any event it will not do them much harm. That is just what is taking place in the field of politics at this time when the particular nostrum offered to the public is labeled "LaFollette." This species of dissatisfaction has gone so far that it is no longer LaFollette but "LaFolletteism" that is combatted. If it is to be combatted successfully, facts and sound reasoning must be made available to the people who are willing to accept them and through them to gradually influence others who have neither the disposition nor the ability to intelligently consider any economic question. While the public at large is really most affected by any unwise voting and legislation, the public at large does no look at it that way. It is for the oil industry to educate the public if it is to be educated at all concerning petroleum.

Denunciation Ineffective

It is necessary at this time to abandon the idea that denunciation of LaFollette will give any relief. It must be remembered that this man has been denounced by a large class of people, especially by leaders of the Republican party, since he put his head up as a political factor in the State of Wisconsin a quarter of a century ago. At every step of his progress he has been held up as a malevolent influence by many leaders. He has been denounced on the floor of the Senate and in the newspapers. He has been ostracized. Those methods have not affected the kind of campaign he has carried on.

Strangely enough, his greatest power, exerted in the last session of Congress was with the assistance of a Democratic minority. Almost as much assistance was given him by timidity on the part of some Republicans.

This writing is directed in the interest of the petroleum industry and therefore an illustration is given directly affecting the industry. When hostility against petroleum was at its height the writer made an effort to have some defense of the industry offered by an insertion in the Congressional Record of at least the essentials of "The Oil Industry's Answer." He endeavored to interest in this effort others who believe it should be done. Public clamor simply paralyzed and stupified Senators and Representatives to such an extent that they feared any act by them would be interpreted as an evidence that they were friendly toward petroleum and they did not care to expose their political craniums to any bombardment.

Politics and Statesmanship

They are looking forward to the voting next November.

Perhaps they were right. As one very distinguished United States Senator said to the writer: "It is necessary to be a politician in order to get a chance to be a statesman." There is some logic in that. The only question is how far is politics to rule and how far is statesmanship to extend its influence. Where does one end and the other begin?

What we call the "radicals" are not so timid. For instance, when the single tax cult was a rampant something like 20 years ago and it was desired to put single tax propaganda before Congress, eight members of the House of Representative joined in an agreement by which each read into a speech on the floor of the House, several chapters of Henry George's Book entitled "Progress and Poverty." That enabled them to have the complete book printed and 1,000,000 copies were distributed over the United States under the congressional franking privilege. They were not afraid. The Senators and Representatives representing oil constituencies did not have the courage to emulate the example of these single taxes. They might easily have done so. A statement illuminating the facts that lie as the basis of the oil industry might have been placed before Congress and the country.

If anyone thinks that this effort made in the last session to bring about a similar publicity campaign was too inadequate to produce a favorable result he should take immediate action to get support to put it through in the next session of Congress: It will be easier then than in the last session and the necessity will still exist because, although the election will be over, the campaign for putting the oil industry under some special Government control that does not pertain to other branches of business will be at its height. It will be necessary to convince the people who are back of the senators and representatives.

May Win Hearing

Experience shows that the La Follette party is very readily accepted as friend and ally of the minority in Congress to embarrass the majority. The thought prevailing among many people that the oil industry is different from other classes of business should be combatted by intelligent publicity. If this educational campaign could be properly conducted it should not be difficult to convince a large element of the La Follette following that oil producers are not a band of highwaymen but are struggling along, operating under the laws of supply and demand, frequently embarrassed by having the supply of petroleum and its products in excess of the demand. There is no difference between the oil industry and every other form of mining but no one is hostile to the orderly operation of great mining properties.

The Guggenheims are greater potentates in the copper industry than any one in the oil industry but nobody thinks it worth while to pursue the copper industry. It is the same with many other forms of mining. The great difference is that these other products do not appeal to the consumer by direct contact as does gasoline, the chief product of petroleum.

It is not strange that there should be a misapprehension in respect to the changes in the price of gasoline. Even the employes of the great oil companies who deliver gasoline at service stations are as ignorant of the basic facts concerning the industry as are their customers.

Reach La Follette's Followers

The difficulty about an educational campaign is that it involves more thought and expense than a denounciation in general terms of La Follette the man. He is treated as if individually he has power to function as the entire Congress. The truth is he has exactly the power of the following that is with him and no more. If an educational campaign properly carried on should change the attitude of that following the power to direct legislation being exerted by La Follette would be destroyed.

Whatever is done at this time to promote an educational campaign will be belated acitvity. It should have been pursued on an extensive plan long ago. This campaign must reach far beyond the industry itself. Oil men know the facts but the users of gasoline do not. There are many serious-minded people of education and high standing who would readily know the facts of the petroleum industry if they are placed before them. If they should today apply to public libraries for such information the book shelves would yield only hostile criticism.

It has been announced that Senator La Follette will address millions of voters during the coming three months by the use of the radio and already preparations are being made to provide the leader of the insurgents with a high power broadcasting station. That he will make such addresses there is no doubt. He will have a great deal to say about the oil industry. The question is whether the oil industry itself is to take timely action by spreading information concerning basic facts among that great audience, or whether this audience is to be uninformed so that it will accept without criticism all statements and arguments heard when they listen in.

Up to the Industry

Unless the industry itself informs them they will not be informed at all. Almost all or any considerable number of them now know about the oil industry is that they would like to have a cut in whatever price they pay for gasoline, that the Government is prosecuting a score of the great oil companies on account of alleged combinations to keep up the price of gasoline by means of patented cracking processes, and that Congress during the last session was chiefly engaged in scandalous charges relating to the conduct of some of the most conspicuous figures in the oil industry. Asked to state in clear terms the basis for this criticism they would find themselves in a hopeless position but the criticism and hostility is in their minds and many of them will vote accordingly. As they vote and talk so will senators and representatives be influenced. This influence will undoubtedly be reflected by the votes of the men who are to be elected to the Senate and the House of Representatives next November.

RECORD WELL IN HUTCHINSON

AMARILLO, Tex., Aug. 2.—The Tex-O Oil Co.'s well in Hutchinson County, which struck gas last week at 1,160 feet, has been completed and shut in as a gasser and the derrick will be skidded over. A record was estabilshed by this well which struck gas 21 days after drilling began. The gas was encountered shallower than in any other well in the field. The completion of this well as a gasser perpetuates the leases on several thousand acres near the well largely owned by Amarillans.

STATE OF TEXAS SUES FOR $50,000,000 OIL

AUSTIN, Tex., Aug. 2.—The Texas Co. and the Humble Oil & Refining Co. are among 42 defendants, including 16 oil companies and 23 individuals, in a suit brought by the State in the Fifty-Third District Court of Travis County to recover title to 648 acres of Harris County oil land and for damages aggregating $50,000,000. G. C. Perkins, of Houston, one of the defendants, has answered, bringing a cross action against the other defendants for $28,000,000.

Allegation is made that defendants came into possession of the land in 1901 and the accounting and settlement asked for are the profits from the oil and gas taken from the land since that time. Mr. Perkins claims to have been wrongfully denied a permit to drill on the land in 1917, through the refusal of the then Attorney General to authorize the Land Commissioner to issue such permit.

The State alleges that 25,000,000 barrels of oil have been taken from the land. It is one of the largest oil land suits ever filed in Texas. The land involved is included in the W. S. Tomey and A. Goldman tracts, in the heart of the Humble oil field.

Mr. Goldman and his wife, who are among the defendants in the State's suit, filed cross action to retain title to the land in the Goldman tract and for $50,000,000 damages covering the oil that has been taken off the land. Mr. Goldman alleges he had purchased the land from the State but that later on the State repudiated the award. He alleges that he has clear title to the land.

WITHHOLD MEXICAN OIL TAX

Mexico City representatives of American petroleum companies have not paid the exportation tax covering the last three months, due May 25. In 1921 a delegation visited Mexico and agreed on the tax with De la Huerta, minister of finance. The total proceeds were to be earnmarked for interest on the Mexican external obligation. Oil representatives now claim Mexico's suspension of interest on the Lamont-De la Huerta agreement removes their obligation to pay the tax and it is understood they intend to wait the impending visit of American oil men, headed by Doheny. The visiting oil men will confer with Obregon on existing difficulties and the intensified development of foreign petroleum investments in Mexico.

DALLAS SUNDAY CLOSING

DALLAS, Tex., Aug. 2.—The Dallas County Independent Retail Gasoline Association after passing through the first Sunday of its era of Sunday closing of filling stations, finds that a few of the 300 dealers in the city refused to close. A committee of the association, headed by E. L. Haskins, has sent notice to those that didn't close warning that violators will be reported to the District Attorney. "We were no joking when we counseled all stations to give Sunday closing at least a three-week's trial," says the notice.

CHARTERED IN LOUISIANA

SHREVEPORT, La., Aug. 2.—The Southern Oil & Refining Co., a producing and refining concern with authorized capital stock of $750,000, has filed its charter here, with incorporators as follows: A. W. Baird and W. G. Banks, of Shreveport; R. L. Henry and W. P. Hobby, of Houston, Texas; L. H. Gray, of El Dorado, Ark., and E. L. DeCamp of Oil City, Pa.

The company is authorized not only to produce and refine oil but to manufacture carbon black and all other by products of oil and natural gas. Mr. Banks is actively in charge of the new concern.

Now Ready to Increase Your Profits

The Hough Extension Lower Valve with **oversize** Steelex Ball and Seat is now carried in stock by the best dealers. It will give the producer greater production from wells with an abundance of fluid; production from head wells secured in less time with slower stroke. Less cut oil—less B.S.—less parting of rods. Valve consists of Steel Coupling made of solid bar stock; Seamless Steel Nipple; inserted crown made from solid bar stock—simple and self-contained—screws into lower coupling—will fit any make of Working Barrel—tapped for gas anchor.

See it at your dealers—test it out and find how satisfactory it is.

THE CHARLES N. HOUGH MFG. CO.

Franklin, Penna.

"Products that cut down your underground overhead"

HAVE YOUR WELLS CORED The SPENGLER Way

Cores taken with Spengler Core Barrels give absolutely reliable information of the strata in the well. Conditions change even in a few hundred feet, and your well may be entirely different from one offsetting it.

SPENGLER CORES

entail no loss in drilling time. Holes are made full gauge at the same time the core is taken.

Spengler Cores are longer and are unwashed by mud fluid.

Spengler expert drillers minimize the possibility of blanks and assure a core as near perfect as conditions in the well permit.

Full gauge holes 12" 4¾" while taking cores

Reaming down holes not necessary

Spengler Core Drilling Company

LOS ANGELES, CALIF.	TAFT	TORRANCE	LONG BEACH
1036 A. G. Bartlett Bldg.	Phone	2013 Arlington	Elm & Frankfort
Phone Met. 7714	Main-81	Phone 140-J	Phones 618-399 653-474

25 CENTS per line first insertion; 15c per line each additional insertion. Cash in advance.

CLASSIFIED WANTS

MAIL your advertisement now. It will be published next week. Cash with order.

FOR SALE—EQUIPMENT

FOR SALE—Complete Gasoline Plant, 2 70-H. P. Bessemer gas engines, 1 12x6x 12 Ingersol Rand Compressor, 1 17x12 Ingersol Rand Duplex Pump, high and low and storage tanks, electric light plant. R. W. Russell, St. Marys, W. Va.

FOR SALE—Eight 7,200 gallon tank cars, standard gauge; also five 5,000 gallon tank cars, for trolley car track; sixteen 1 ton Koppel coal charging cars for boiler rooms. Immense stocks of Pipe, Valves and Fittings in all sizes. Wire, phone or write. Tate, Fisher & Rice Co., 258 Washington St., Boston, Mass. Telephone Main 8365.

FOR SALE—Several gas engines and compressors. All makes and sizes. Electric plants, both D. C. and A. C.; four drilling machines. R. W. Russell. St. Marys, W. Va.

FOR SALE—One No. 23 Star Drilling Machine fully equipped with necessary tools. I am offering this machine at a special price for immediate sale. L. H. Brocksmith, 1856 Menard Street, St. Louis, Missouri.

GENERAL GEAR & MACHINE WORKS
"If It's Done in Metal, We Do It"
Gear cutting, blacksmithing, machining, welding, die making, and metal stamping.
115 South Detroit, Tulsa, Okla.

TANK BOLTS

SAME-DAY SHIPMENT

⅞x¾-inch, ⅞x¾-inch, ⅞x1-inch, ⅞x1¼-inch, ⅛x1-inch.
Write or Wire for Quotations

STEEL MFG. & WAREHOUSE CO.

1447 Genesee St. Kansas City, Mo.

FOR IMMEDIATE SHIPMENT—Second hand line pipe and casing in A-1 condition:
10 miles of 3-inch Standard line pipe.
5 miles of 4-inch Standard line pipe.
5 miles of 6-inch Standard line pipe.
70,000 feet of 6⅝-inch 20- and 24-lb. casing.
60,000 feet of 8¼-inch 28-lb. casing.
20,000 feet of 10-inch 35- and 40-lb. casing.
5,000 feet of 12½-inch 50-lb. casing.
2,000 feet of 15½-inch 70-lb. casing.
JOSEPH DAVIS COMPANY
613 Kennedy Bldg., Tulsa, Okla.

FOR SALE—80-H. P. Venn Severin Stationary Oil Engine; type I X, 300 R.P.M.; has two cylinders; roller bearing piston pins; piston 18 inches long; in an exceptionally good condition. Inspection at our warehouse in Chicago. Write or call for further information and data. The E. L. Essley Machinery Co., 551 W. Washington Blvd., Chicago, Ill.

FOR SALE—NEW
Four 12,000-gallon riveted tanks; ¼-steel, 10'x20' 7". Price $525 each, f.o.b. Suject prior sale. A. V. Konsberg, 40 N. Dearborn St., Chicago, Ill.

FOR SALE.—Six 14-inch vacuum or gas pumps with stirrups to connect to beam. One Duplex steam pump for mine or boiler use. Address Pump, Box 776, Butler, Penn.

PIPE COUPLINGS, WROUGHT IRON ⅛" to 16"—black and galvanized. Surplus stock. Extremely low prices.
H. C. ATKINS MFG. CO.
745 S. 3rd St., St. Louis, Mo.

GUARANTEED TANK TABLES
Tracings $2.50 to $5.00 according to size of tank. White cloth prints 75c to $1.25 each. Blue prints 25c to 75c each. Send strapping report and instructions to H. F. Heydrick, 208 South 12th Street, Muskogee, Okla.

VALVES—Globe Angle, Gate Valves. Standard makes. Large stock, priced very low. Up to six inch. Send for discount sheet. Also pipe fittings. Buffalo House Wrecking Co., Buffalo, New York.

FOR SALE—EQUIPMENT

FOR SALE—One No. 25 Star Drilling Machine, with a good line of bits and tools, in good shape; half mile from railway; $1,800. Box 248, Wellsville, Kan.

PRACTICALLY NEW—32"x12' Bridgeford Geared Head Engine Lathe, late type, eternal face plate gear drive, single pulley, quick change, compound rest, a wonderful buy at $1,750.00 f. o. b. Bridgeport,
LUCAS & SON, Inc.
Bridgeport, Conn.

FOR SALE—150 feet of 70-pound 15½-inch; 1,000 feet 40-pound 10-inch; 2,700 feet 8¼-inch 32-pound 8-thread and 3,400 feet of new 24-pound 6¼-inch 10-thread J. & L. Woodlawn. Special casing; 100,000 feet of 2-inch line; 20,000 feet of 2-inch tubing and rods; also, excellent powers, engines, tanks, and other equipment. J. F. Arnold Co., Decatur, Ind.

P. & H. TRENCH MACHINE
Cuts 24 inches to 28 inches wide by 7 feet, 6 inches deep; wheel type No. 105; has only cut ¾ mile; gasoline engine drive. Cost $13,000—1923—price $7,100 cars Indianapolis, Ind.
ROSS POWER EQUIPMENT CO.
Indianapolis, Ind.

FOR SALE—One No. 3 Keystone Drilling Machine, with bits and tools; 3 miles Garnett, Kan.; $800. Box 248, Wellsville, Kan.

COMPLETE Union Tool Rotary drilling rig; twin-cylinder engine; two 45-H. P. boilers; 2,400 feet of 4-inch drill stem; new Hughes rock bit; complete set fishtail bits; mud hog pump. This rig is complete and in good condition. Can be seen at Dixie Oil Co. lease, Cement, Okla.

25,000 BARREL TANK
STILLS, condensor boxes, boilers; large quantity of various size fittings; all in A-1 condition. Priced at a bargain. Call or write F. A. Sanders, 420 Mayo Bldg., Tulsa, Okla., phone Osage 7037, or 98, Jennings, Okla.

FOR SALE—1200 feet of 4⅓ casing; run once; located at Independence, Kans. Address Geo. D. Spruill, Arkansas City, Kans.

FOR SALE—Heavy string Oil Well Supply Co. standard tools, boiler and engine included. Price f. o. b. $3,000.00. Address W. H. Harvey, Water Valley, Miss.

FOR SALE—Shop worn, but new, never used standard rig. Includes triplex pipe steel (L. C. M.) derrick, rig irons, steam drilling engine with fitting; boiler with stack and trimmings; foundation timbers; drilling and casing tools; cable drilling and sand lines. Also quantity part new and used casing 12½-inch down to 5-inch. Immediate delivery f.o.b. cars, Oklahoma where rig can be inspected. Snap for quick cash buyer. Address Box A-240, care The Oil and Gas Journal, Tulsa, Okla.

ONE 72"x18' Boiler, 66-4" flues used 2 years, fine condition, 200 pounds pressure; one 48"x12'; one 54"x14'; one 60"x18' good condition, 100 pounds pressure, one 150 h.p. boiler feed, one 10x12x8 steam pump, one pressure tank, boiler shell new heads 54"x18'; 5-h. p. Electric Motor, direct connected water pump, 40 pounds pressure 180 gallons minute. 10 h. p. Stationery Gasoline Engine. W. H. Underwood, Hutchinson, Kans.

LEASES—PRODUCTION

ALLEN COUNTY, KENTUCKY—Three to 10 barrels settled production; 50-acre lease, wells within 300 feet; low price or drilling proposition. Box 489, Bowling Green, Ky.

ROYALTY STROUD FIELD
Trend of big production running toward tract in which fee owner will sell up to one-half royalty. Half mile from big production. Quarter mile from four drilling wells. Large operating company. Phone Osage 6889. Address Box A-320, care The Oil and Gas Journal, Tulsa, Okla.

LEASES—PRODUCTION

OPERATORS ATTENTION
Survey 2,458, south part Archer-Baylor County, surrounded by many drilling tests and producers. Worthy of prompt investigation. Will sell in fee 120 acres at $100 an acre. Address owner, Jno. J. Dillon, P. O. Box 194, Denver, Colo.

OIL ROYALTIES
On the best structures in Routt and Moffat Counties. Looked upon as one of the most important oil fields in the Country. Get in while prices are reasonable. F. W. Thomas & Co., Mount Harris, Colo.

INDIANA PRODUCTION—235 acres on rock road 30 miles north Evansville, 5 settled wells, producing 75 bbls. per day. 15 proven locations, with possibly many more. Complete power plant, tanks, three strings drilling casing. All offered at bargain, settle partnership. No trouble to give detail information with pipe line run to interested parties. H. A. Mann, 314 Parrott St., Evansville, Ind.

TEXAS

CARSON COUNTY—Our well, the Culbertson strikes oil and gas at 1,210 feet; first shallow record for the Panhandle; we are selling limited amount our acreage around this well; get in while prices are low—now $10 to $100; large companies have acreage about us; late contour map and weekly advice of progress free.
TEXAS-OKLAHOMA LEASE CO.
1418 Kirby Bldg., Dallas, Texas

ROYALTIES—Deed to one-half land owners oil and minerals, in the great Cumberland County, Kentucky, Field; close to production, on structure, approved by reliable geologists, $2.50 per acre, up. Frank Richardson, Columbia, Ky.

HAVE GOVERNMENT Leases, some patented land; well on structure; 10 to 50 bbl. wells at 500 to 700 feet, 42 to 54 gravity. Also general merchandise store. Come and look it over. A. H. Spencer, Bluff, Utah, or Kayenta, Ariz.

FOR SALE—Shallow leases, proven territory, Allen County, Ky. 400 feet drilling. One lease 125 acres, 5 wells equipped, except power, exceptional bargain, approximately 25 barrels flush, $6,000.00. Cash or terms. Address Box 80, Scottsville, Kentucky.

SOUTHEAST New Mexico has opened new field with 37 gravity oil from 1,950 feet with 47 feet of sand. Intensive drilling campaign just starting. We own leases all parts of Southeast New Mexico. Orcutt-Harris & Co., Inc., 816 Colcord Bldg., Oklahoma City.

MEDINA COUNTY

$1.50 an acre

We have a very limited supply of Medina County, Texas, leases practically hemmed in by both the Humble and Mid-Kansas people which we are offering for only $1.50 an acre.

We also have many other leases. We have Reagan County 4 miles from Wrightsman's test; Bexar County 4 miles from Raybourn test; and several others close to wells. Here are a few of them:

Reagan County	$3.50 per acre
Pecos County	$1.00 per acre
Crockett County	$2.00 per acre
Crane County	$1.00 per acre
Karnes County	$2.00 per acre
Gillespie County	10c per acre

30 other counties.

Free map of Texas showing Marathon Fold and Balcones Fault given with each inquiry. Write today for our latest list of bargains. Don't buy any leases until you see ours. We sell for less. Get particulars at once. No obligation.
GULF REALTY COMPANY
287 Bedell Bldg. San Antonio, Texas

LEASES—PRODUCTION

10c AN ACRE to $25 an acre. Texas Oil Leases. Easy terms. Get particulars. No obligations. Gulf Realty Co., 285 Bedell Bldg., San Antonio, Texas.

McMULLEN and Live Oak Counties, Texas, recognized today by the leading oil men and geologists as the coming big oil field of South Texas. Choice commercial leases. Large and small tracts. Drilling contracts. Acreage in fee with all mineral rights. Bargains; easy terms. Prices advancing rapidly. Bank references furnished. Gulf Leasing Co., 820 Brady Bldg., San Antonio, Texas.

HAVE DECIDED to lease the northeast quarter of the northwest quarter of Section 16-14-11, Okmulgee County, Okla. Small Dutcher sand producer offsetting center of west line. This well should have come in big, had it been drilled with more care, having flowed big and often during past two years. Look this 40 up, then make me best cash offer. Have refused to lease same up to present, rejecting good offers. (8 sands.) Also 480 acres in Section 26-13-25 Sequoyah County, Okla., (a good future prospect.) Address C. P. Repetto, 7227 High Street, Maplewood, Mo.

MARATHON FOLD AND TEXAS PANHANDLE
LEASES in Reagan, Crockett, Pecos, Terrell, Glasscock, Sterling, Gray, Carson, Armstrong, Donley, Wheeler, Hemphill and other counties in Marathon Fold and Texas Panhandle. Lowest prices; best locations. Write for free maps and reports. P. R. MacIntosh, 215 Nell P. Anderson Bldg., Fort Worth, Texas.

PRODUCING Royalties in Texas bought and sold. J. F. Marion Co., Magnolia Bldg., Dallas, Texas.

MEXICO
We have special facilities for looking after the interests of Oil Companies or individuals whose holdings in Mexico do not justify the maintenance of an office force or manager. Correspondence solicited.
Cia. Bancaria E Industrial de Tampico, S. A.
Capital $400,000.00
H. Y. Blake, Manager
P. O. Box 492, Gomez Bldg.
Tampico, Mexico

FOR SALE—2,400 acres promising oil land Richland Parish, Louisiana; not far from famous El Dorado Fields; on good structure; it has most enough timber on it to pay for it and will make best of farm land when cleared. Price only $12.50 acre in fee, terms easy. For particulars write W. T. Pitts, Indianola, Miss.

NEW MEXICO OIL & GAS LEASES
Forty acres for $10. We offer five-year leases in Valencia, McKinley, Sandoval, Torrence, Guadalupe, Quay, De Baca, Rio Arribba, Soccorro and Chaves Counties, from 25 cents to $1 per acre. Perfect titles and low rentals. Write for maps and particulars.
NEW MEXICAN EAGLE OIL CO.
Saupla, Okla.

FOR SALE—At bargain prices, oil and gas leases, production and royalties in the Kentucky shallow fields. For full particulars and maps, address W. P. Harley, Bowling Green, Ky.

YOU WILL always be right in reading this Classified Section, as it is the best Petroleum Publication Classified Section in the world. It will help you.

THE SMALL SUM that it costs to insert an advertisement in the Classified Section of The Oil and Gas Journal enables you to place your desires in the minds of men who are always interested in a good proposition.

16,000 ACRES oil and gas leases in block; Colorado Field. Sell for cash or sublease for drilling contract. Box 2261, Denver, Colo.

25 CENTS per line first insertion; 15c per line each additional insertion. Cash in advance.

CLASSIFIED WANTS

MAIL your advertisement now. It will be published next week. Cash with order.

LEASES—PRODUCTION

YOU DON'T QUESTION whether the Standard, the Ohio or Union Oil companies know their business. The Wall Syndicate controls the largest, highest dome in New Mexico, townships 25 and 26, actually 2,600 feet higher than Amarillo, same monocline; (See monoclinal crosscut from government's report, page 14, July 17th issue of The Oil and Gas Journal.) Standard drilling day and night, SW 15-23-24, Colfax County. Eureka's well with 6 sands excellent showings, proving structure. Offering 40-acre tracts at $10 per acre. Bearing full investment interest in well, lease actually bonus. We are much higher and better located than other drilling wells. Local or district representatives wanted. Wall Syndicate, Box 824, Wichita, Kans., or 429 17th St., Denver, Colo.

640 ACRES, new five-year commercial Producers "88" oil and gas leases. Eastman Pool, Cowley County, Kansas. Within 2 miles of new 735-bbl. well and several others making 300 to 400 bbls. daily. Priced right, if taken at once. R. P. O'Grady, 404 Gumbel Bldg., Kansas City, Mo.

FOR SALE—the following described oil land: The SE quarter of the SE quarter and the east 15 acres of the SW quarter of the SE quarter of Section 23, Township 33, Range 14, Montgomery County, Kansas. Address Box A-340, care The Oil and Gas Journal, Tulsa, Okla.

OPERATORS—The stampede is on in Montgomery County, Mississippi, world's next big high gravity oil field. Winona, Miss., mecca for oil men. Balcones Fault leases. W. C. Brooks, Memphis, Tenn.

WHITE SPACE at the top and bottom of an advertisement makes it conspicuous. Ask for it in your next advertisement. Figure the cost at the regular rates per line.

TO LEASE for oil and gas, several hundred acres lying in direct line between Malone No. 1 in Chautauqua County and new well in west edge of Montgomery County, Kansas; both wells in the second break in lime and reported at 400 and 4,000 bbls. respectively. M. C. Sadler, 1053 Faxon Ave., Memphis, Tenn.

McCLAIN CO. OKLAHOMA

Own four tracts, 160 acres each, center of county. Those posted on drilling progress toward this acreage, from every direction, must know the opportunity is not far off to realize handsomely on a trivial investment. My leases date Sept. 15th, 1923, five years, rental fifty cents per acre. For prompt acceptance, I will sell half at $4.00 per acre; Twn. 6 North, Range 2 and 3 West. Jno. J. Dillon, Box 194, Denver, Colo.

NEW MEXICO STATE OIL LEASES Chaves, Union and Roosevelt Counties. For details as to location in said counties. Address C. A. Wicklund, Independence, Ky.

FORT COLLINS, COLORADO, OIL LEASES

I have for sale on structure acreage in close proximity to drilling wells of Union Oil Company of California. This acreage is the best available in the field. If you have cash and mean business write, call or wire.

O. C. BRUNSVOLD
Room 5, Ferguson Bldg., Denver, Colo.

WE HAVE acreage to exchange for a test well on structure, also mines for sale. Tell us what you want. Colorado Mineral Developing Co., 122 Pope Block, Pueblo, Colorado.

$1,000 WILL BUY all the Royalty on 80 acres on structure near 2 drilling wildcat wells. Will pay 8 per cent on investment. Write Box 366, Guthrie, Okla.

LEASES—PRODUCTION

OIL LEASES and royalties in the Blackwell, Deer Creek and Tonkawa Field for sale. Have the S½ of 14-28-3 west for $5.00 per acre, 5-year lease, joins Marland block. Wire me today if you want a bargain. J. R. Sparks, Blackwell, Oklahoma.

FOR SALE—Oil lease on 160 acres at Cotton Valley, Louisiana. Near production. Address, W. C. Lawrence, owner. 510 The Arcade, Cleveland, Ohio.

I HAVE some desirable leases on a big structure in Eastern Kentucky at $1.00 per acre, also coal land, timber tracts and producing properties. E. D. Watkins, Oil Producer, Irvine, Ky.

HELP WANTED

THE SCHEME of life is so arranged that some men have capital and need equipment, while others have salable articles and need cash. For these men, The Oil and Gas Journal Classified Section provides an excellent opportunity to broadcast their wants.

FROM NOW ON, when I want to do business with the real men of the petroleum industry, I'm going to put my advertisement right here in this Classified Wants Section.

SUPERINTENDENTS, Engineers, executives, now earning $3,000 to $25,000, will find our individual, confidential service a dignified and effective medium to make desired connections. Personally conducted by Mr. Jacob Penn, the eminent employment authority, known to leading business men throughout America. Not an employment agency. Inquiries solicited only from persons with records of successful performance and stability. Jacob Penn, Inc., 305 Broadway, New York City, N. Y.

POSITION WANTED

PRACTICAL man, a driller for 10 years and 10 years running tools and production superintendent wishes place with reliable company. Address Box A-322 care The Oil and Gas Journal, Tulsa, Okla.

RESPONSIBLE POSITION wanted by civil engineer who has had several years 'oil field experience managing large oil properties. Now employed developing Oklahoma properties, but desires employment in Rocky Mountain States. Excellent references. Address Box A-243, care The Oil and Gas Journal, Tulsa, Okla.

SUPERINTENDENT of tools and production and expert fisherman, desires connection with reliable oil company; years of practical experience. Can go anywhere. Address P. O. Box 725, Tulsa, Okla.

MECHANICAL ENGINEER — A journeyman mechanic technically educated with sound judgment in purchase, inspection, installation and operation of pumps, compressors, gas and oil engines, desires responsible position. Can train and handle men. Factory and oil field experience. Address Box A-342, Care The Oil and Gas Journal, Tulsa, Okla.

STENOGRAPHER, translator, secretary; fluent Spanish, French, Portuguese; native American; single; long residence in Europe and South America; knowledge of geology, index fossils and oil field nomenclature. Address Box A-310, care The Oil and Gas Journal, Tulsa, Okla.

POSITION WANTED by young man as accountaint and all-round office man; can take dictation; seven years experience in oil business in Tulsa; capable of taking charge of office; best of references. J. K., P. O. Box 1773, Tulsa, Okla.

TANK CAR FOREMAN, understands rebuilding, repairing and painting of tank cars, also A. R. A. rules, prices and tank car specifications, wants position with tank line or refinery. Best of references furnished as to ability and energy. Address C. F., care The Oil and Gas Journal, Tulsa, Okla.

WANTED

WANTED—Party to help develop large acreage in southwest Indiana. F. M. Weister, Box 514, Carnegie, Pa.

WANTED—To buy a good Star No. 28 rig. Address J. W., 1240 N. Cheyenne St., Tulsa, Okla.

WHITE SPACE at the top and bottom of an advertisement makes it conspicuous. Ask for it in your next advertisement. Figure the cost at regular rates per line.

WE WANT TO BUY ENGINES

Full Diesel and Gasoline Engines 50 HP up to 200 HP. Submit full details including price, age, photo, cylinder and overall dimensions and full information in first letter. Address Box A-331, care The Oil and Gas Journal, Tulsa, Okla.

WANTED—Reliable party to drill test wells in Morehouse Parish, La., for acreage. Interesting tests in vicinity now being made. Address Box A-345, care The Oil and Gas Journal, Tulsa, Okla.

WANTED—Producing royalties, Oklahoma and Kansas. Give full details. P. O. Box 502, Independence, Kans.

WANTED—Three strings of one-run casing in A-1 condition in sizes 12½, 10 and 8-inch, standard weights. Send prices, length and weight. Wellington Oil Company, 604 Central Savings Bank Bldg., Denver, Colorado.

WRITE your advertisement, mail it to The Oil and Gas Journal, and it will be placed in the hands of thousands of producers and refiners in all parts of the world. It doesn't cost much.

WANTED—500 to 2,000 foot drilling for new machine and tools. Will give satisfaction and appreciate any proposition. Address Box A-321, care The Oil and Gas Journal, Tulsa, Okla.

WANTED—10,000 feet of second hand 3-inch line pipe. Premier Window Glass Co., Pennsboro, W. Va.

WANTED—Party or company to take over and complete well now down over 2,800 feet, good geological report, leases abstracted, will allow free use of rotary now on ground, give large block of leases and ½ interest in well. Address Box A-343 care The Oil and Gas Journal, Tulsa, Okla.

FROM NOW ON, when I want to do business with the real men of the petroleum industry, I'm going to put my advertisement right here in this Classified Wants Section.

WANTED—To buy interest in production. Have ten to twenty thousand dollars, drilling tools, and casing to invest with some one who desires partner who will look after business and lease and go ahead and do some new drilling. Address J. F. S., 246 No. Holyoke, Wichita, Kans.

WANTED—Block of securities to market on commission, by reliable house. Money should be for development. Brokers, U. S. Realty Building, suite 512, New York.

WANTED—Help to develop shallow leases, Moran, Texas. You finance, I furnish lease and do work. You get money back out of production before split. Address Box A-341, care The Oil and Gas Journal, Tulsa, Okla.

THE TIME SPENT in writing a description of the good material which you would like to procure at a reasonable price will be well spent if you mail it to The Oil and Gas Journal Classified Wants Department for next week's issue.

The Classified Wants Section will help you to get just what you want, as the students of the Classified Section are great in number and control the buying or selling of a large portion of the material used in the oil and gas industry. Let your fellow readers help you. They can, if you put your advertisement in the Classified Wants Section.

BUSINESS OPPORTUNITY

FOR SALE

Completely equipped machine shop employing 11 men, near shallow oil field, another now opening; a good paying proposition; 17 years in business; only shop in 50 miles radius; reason for selling, owners going into implement manufacturing business. Cameron Machine Shop, Cameron, Texas.

PANHANDLE, Carson County, Texas, the coming oil city. Trackage, business and residence lots for sale by owner. Fred Horsbrugh, Amarillo, Texas.

WILL RAISE MONEY on or buy outright partially developed leases in any State. Give full details first letter. Room 618 Pontiac Bldg., St. Louis, Mo.

CORE DRILL your structure with diamond drills and reduce hazard of wildcatting. Let us help your geologist correlate structure before you put cable tools at work. The cost is relatively small and the possible saving enormous. On well located tracts we will accept acreage in lieu of profits from drilling. Drilling Corporation of America, George H. St. Clair, General Manager, 205 Cosden Bldg., Tulsa, Okla. Phone Osage 8183.

FOR SALE—One service station complete with bulk station and two trunks in town of five thousand: station located on Red Star Highway and Capitol Route, a money-maker and priced to sell. Address Box A-332, care The Oil and Gas Journal, Tulsa, Okla.

OIL MAN, do you need a telephone at the well you are drilling? We can save you money on the building of your telephone and electric lines. Name the town and distance and we will be glad to submit our estimate on the complete installations. We are equipped and have the experience on telephone, electric and telegraph lines.

OKLAHOMA
HIGH LINE CONSTRUCTION CO.

805 Mayo Bldg.

Tulsa, Okla. Phone Cedar 2551

INCORPORATIONS

DELAWARE incorporator. Charters; fees small; forms. Charles G. Guyer, 901 Orange St., Wilmington, Del.

YOU WILL always be right in reading this Classified Section, as it is the best Petroleum Publication Classified Section in the world. It will help you.

OKLAHOMA Incorporator. Charters and forms, moderate fees. L. M. Nolan, Oklahoma State Capitol Bldg., Box 115, Oklahoma City, Okla.

FOR SALE—PETS

FOR SALE—3 registered English Setters, 2 male, 1 female, $50 each. Address C. A. Hack, Route 2, Tulsa, Okla. O-9821F2.

REGISTERED Bull Pups—Bulldog Park, 501 Rockwood, Dallas, Texas.

STANDARD FORMS

CONSUMERS' LEDGERS

We are prepared to furnish from stock standard forms of Gas Meter Consumers Ledgers. Sample forms and quotations on request. First class material and workmanship.

DERRICK PUBLISHING CO.
Oil City, Penn.

OIL FIELD LEGAL BLANKS—Leases, assignments, releases, township plats, gauge books, run tickets, time books, well records, etc. Request on your letterhead gets free catalogue. Olds Press, 215 East Third St., Tulsa, Okla.

OLD FRIENDS

BILLIE WHITSON—Will you please let us know where you are as Mamma and I need you. Rozella. Address 435 W. 42nd St., Los Angeles, Calif.

EMPIRE
OIL METERS

Oscillating Piston design, unsurpassed for accuracy and staying qualities.

MADE IN ALL SIZES, 5/8" TO 6" INCLUSIVE

We have been making EMPIRE meters for forty years. They are used successfully by thousands, all over the country. They have been tested by every variety of hard service, and have thoroughly proved their merit.

Send for new circular 110-O

NATIONAL METER COMPANY

299 Broadway, N. Y. — 1455 West Congress St., Chicago

Boston · Cincinnati · Atlanta · San Francisco · Los Angeles

Nye
The Die Man
Pipe Tool Maker to the American Plumber and Steamfitter

THE BUSINESS TWICE?
OR
TWICE THE BUSINESS?

The Man who picks things up and lays them down, to do some other time, loses money.

The Man who picks things up and finishes them up before he lays them down makes money.

The tool that works hard and cuts ragged, that wastes your time and spoils your temper, loses you money.

The tool that does the job at once, without delay, without bucking or breaking, makes you money.

Nye Dies and Tools

are for plumbers who want to do twice the business, not the business twice.

Cutting faster and smoother than all others, they make a shop run the same way.

Go into any shop that is doing twice the business it was a few years ago and you will find they use NYE DIES and TOOLS.

They do the business at once.

THERE'S the NYE VISE STAND and PIPE BENDER, a sturdy, dependable tool that will help you do twice the business, twice as fast. Send for one on 10 days free trial.

HARRY G. NYE
The Nye Tool & Machine Works
108-128 No. Jefferson St., Chicago, Ill.

INDEPENDENT JOBBERS' PLACE IN THE INDUSTRY

(Continued from Page 20)

In this connection it is worthy of note that a few days ago it was officially indicated that the outstanding refinery organization of the entire United States with no wholesale or retail marketing facilities was about to change its policy in that regard after two years of unsatisfactory operation. The company was Cosden & Co., operating in West Tulsa, the largest refinery in the Mid-Continent Field and one of the largest light oil plants of the industry. The company, which also has crude production supplying a part of its renery requirements, built up a strong refinery and crude producing organization without the aid of any marketing organization except for tank car sales to independent jobbers and marketers. But the past two years has convinced the company that this method of distribution on a permanent plan is in many respects unsatisfactory and a definite change in policy is expected within the next few months.

The writer has found many other smaller refinery organizations dependent on tank car sales for distribution, expressing dissatisfaction with the results obtained. Lack of finances at this time is the usual explanation offered for failure to provide bulk and service stations. Many are still keeping in mind the time when they operated profitably with their tank car sales organizations and they are hoping for a return of similar conditions. They prefer to confine their operations to production and refining, having no trained organization with which to enter the wholesale and retail fields. But there are breaks in their numbers almost monthly and several are experimenting in a small way with the idea of determining the feasibility of expansion another year.

Reason for Development

The reason for this situation is known to everyone who has kept in touch with the markets of the industry during the past two years. Briefly, it is a development of a situation in which those refiners which sell on the open or tank car market have not been able to maintain price levels in line with other production costs or the tank wagon and service station prices are established by the major oil interests of the country, which have complete organizations and for that reason are not concerned directly with the refinery market.

The situation has given the independent jobber an exceptionally wide margin on which to operate but at the same time it has forced losses upon the refiner lacking his own marketing facilities which has driven a few plants out of business and brought troubles to many others. Various remedies have been proposed for this situation involving charges that the markets of the industry are often artificially maintained by the major interests of the industry. Many independent jobbers have not hesitated to reduce their tank wagon and retail prices in line with the lower tank car prices and have usually forced their competition to meet their price levels.

In the light of these developments the casual observer within and without the industry has come to the conclusion that the jobber occupies both a strategic and secure position in the markets of the industry. A more careful study of the situation has led others to believe that the opposite is true, a position certainly supported by the accompanying table and the inevitable trend toward complete organizations within the industry which was just outlined.

It is obvious that when any refinery organization enters the marketing field, and thus becomes a member of Class 2, that its interests in any development having to do with the determination of markets, lie usually with the Standard group rather than with the independent jobbers. With the addition of marketing facilities, responsibilities largely increase, including the investment. Its method of operation including the storage of crude and refined products must necessarily correspond as near as possible to the larger companies.

These dominant interests of the industry are responsible for the maintenance of a crude price schedule which will not only provide for current needs but also for the future. At the same time they have the tremendous investment in stocks which make possible whatever stability the markets of the industry possess. It has happened many time in the past that posted crude price schedules have been established which brought more crude production than was needed for current requirements and additional stocks required to back up an ever increasing yearly demand. It is on such occasions that the disintegrated units of the industry often time establish markets both on crude and refined products with little regard to the price structures of the larger integrated companies of the industry. These major interests must of necessity take into consideration in establishing prices not only current production conditions but also the cost of stocks on hand and the assured requirements of consumption six months or a longer period in the future.

These major interests of the industry have often stored crude and refined products over a period of several months at prices they believed consistent with fundamental conditions within the industry only to have the crude market weaken due to a temporary overproduction. This is an inherent situation which has for its cause the uncertainty of raw material which makes it impossible to adopt a posted crude market structure which will assure just enough production to meet requirements and no more or less.

Solution Not So Easy

Many have advanced a supposedly easy solution for the market difficulties which always develop in a period of so-called "overproduction." They have said that the remedy lies in the immediate adjustment downward of crudes and all refined products of which there is a temporary over supply.

It should be clear that regardless of how easy this rapid adjustment might be made by independent jobbers, it is far more complicated problem to the independent producer and refiner who make possible his existence and to the complete organizations with the great bulk of the industrial investment. It would appear to be economically sound and for that reason in the final analysis fair to the consuming public that the market adjustments to an oversupply should be gradual and take into consideration the past which brought the heavy stocks and the future with its enlarged demands as well as current conditions admittedly of a temporary nature.

It is these conditions which are causing more and more concerns to believe they cannot hope to protect themselves against the inherent hazards of their business and secure a reasonable profit consistently unless they have their marketing facilities for their gasoline, their principal product. The larger companies sensed this situation years ago and, with rare exceptions, they have had their wholesale and retail marketing facilities expand with their growth in the crude and refining departments.

This is not a prediction as to the passing of the independent jobbing interests. Individual jobbers over a period of years have been able to develop remarkably efficient organizations which have little to fear from their competition so fas as sales efficiency is concerned. In most cases these concerns have realized their position in the industry as a whole and have, through contracts with their refiners, endeavored to maintain a market structure which not only protected themselves but their sources of supply and fair to their large competitors which shoulder the main responsibilities of the entire industry. Their position is undoubtedly secure, providing others of their class do not continue to force the strong producing and refining interests into the marketing division.

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Oildom's Loveliest Girls Princesses at Big Oil Exposition

The most beautiful daughters of 11 oil producing States will make up the royal princesses of the petroleum world at the International Petroleum Exposition in Tulsa in October. From their number the most charming of all will be selected as Queen to reign beside King Petroleum over the pageantry, revels and social events of the industry's biggest week.

The Exposition management has planned a program of picturesque ceremony and pageantry as part of the entertainment to be offered the visitors who will throng Tulsa for the oil and gas show. In the Pagent of the Princesses, the first event, the State princesses will appear in all their splendor, gorgeously costumed, upon floats designed especally for them, symbolic of the State that each represents, and costing about $1,000 each. The Queen's float will be even more brilliant and costly then those of her royal companions. King Petroleum will be mounted upon the most spectacular throne of all, symbolizing the whole oil industry. The King will be selected by a committee of oil men from among the pioneers of the industry. All the pageantry and outdoor spectacles are under the direction of Herbert Barnard.

On Governor's Day, the day on which the governors of the oil producing States have been invited to be the special guests o fthe Exposition, the State princesses will christen the buildings and avenues of the Exposition, which have been named after the States. The princesses will also take a prominent part in the reception for the foreign delegates, the exhibitor's reception, and the crowning event of the social season, the Queen's ball.

Princess Oklahoma will not take part in the contest for queen. She will act as hostess to the guests from other States and assisted by Miss Tulsa, the city's representative in the Atlantic City national contest, will preside in a spirit of hospitality over the entire Exposition. An extensive program of entertainment aside from the public events is being planned for the visiting princesses.

The State representatives will be chosen by a contest conducted by one of the leading newspapers in each of the States concerned. The Exposition will furnish round trip tickets and Pullman accommodations to each princess and her chaperon, and the newspapers are planning and furnishing the magnificent wardrobes with which each young woman is equipped before entering upon the season of pleasure.

The newspapers in charge of the contests are: The Denver Rocky Mountain News, Colorado; Louisville Times, Kentucky; Shreveport Times, Louisiana; Billings Gazette, Montana; Lima News, Ohio; Tulsa World, Oklahoma; Oil City Derrick, Pennsylvania; Fort Worth Star-Telegram, Texas; Clarksburg Telegram, West Virginia; Casper Tribune, Wyoming.

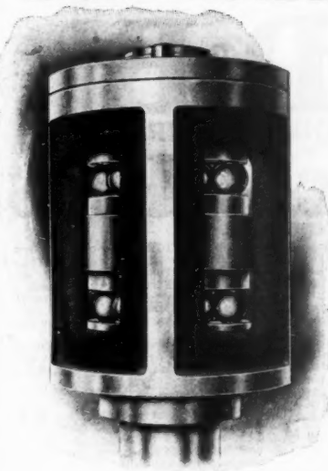
BRAZIL TO USE SHALE OIL

Without coal or oil in quantity, Brazil faces the task of producing a cheap domestic supply of fuel in order to avoid the high cost of importations. Her relief says the Petroleum Times of London will come in the development of her extensive beds of oil shale, locally called "turfa." These have been reported on favorably by experts, and their development is in progress. Mackenzie College, at Sao Paulo, has organized a research department for a study of the problem. The turfa yields up to 113 gallons of oil to the ton.

IN MARKET FOR FUEL OIL

HOUSTON, Tex., August 2.—The Sewerage and Water Board of New Orleans, La., is in the market for 300,000 bbls. of fuel oil. The board will receive offers until noon, August 12.

Longyear Ball Bearing Cage for Hydraulic Feed



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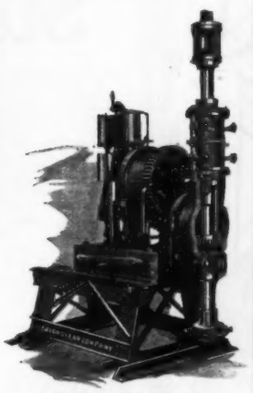

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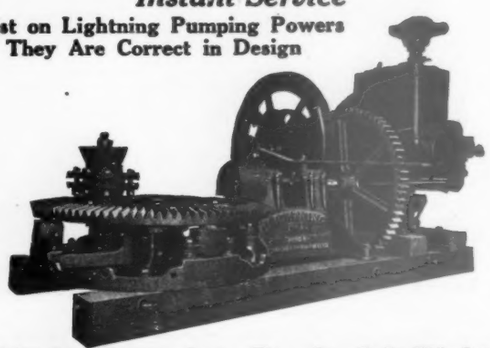

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Shackle lines set low to the ground (13 in.) eliminate excessive strain. Quickly installed.

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GROZNY PRODUCTION GREATLY INCREASED

A report from Russia says that in the course of the past few weeks boring at Grozny has resulted in striking three good flowing wells with a daily production of 183,000 poods of petroleums. The first was struck on June 24 on a new field ex borehole 3 on allotment No. 33. Its daily yield is 20,000 pood of paraffiniferous petroleum. Then on June 24, on the old fields, ex borehole 3, allotment No. 130, a gusher was struck with a daily yield of 13,000 poods of nonparaffiniferous petroleum; and on June 30, on the new fields, ex borehole 1, allotment 33, at a depth of 299 sazhens, a well was struck with a daily yield of 150,000 poods. All these wells have been temporarily plugged effectively.

On July 2 a fourth well was struck on the new fields delivering nonparaffiniferous petroleum at the rate of 15,000 poods a day. These four completions are regarded as a brilliant result of the boring campaign in process in the Grozny district and are expected to raise the output of Grozny to 10,000,000 poods per month, and so beat the previous record in 1917 of 9,000,000 poods per month. The successful plugging of the wells is considered a source of congratulation. The question now becomes one of transport. This district, supposed for a time to be dying out, assumes a leading importance.

The Government Planning Authority is promoting the construction of pipe lines between the Caucasian oil producing regions and the Black Sea ports, thus: Grozny-Novorossisk, Grozny-Tuapse and Baku-Batoum. The plans and estimates are to be pressed forward so the metallurgical concerns may receive orders for their part of the work before the end of the year.

The gross production of naphtha at Baku during the month of May was 20,967,000 poods. It is stated the new oil gusher discovered at Baku yielded during 63 hours nearly 4,000 tons of oil. The Surakhany well No. 66 yielded 998,000 poods (about 16,000 tons) of naphtha during the period of May 24-June 25. During the first three days the daily flow rose from 30,000 to 90,000 poods, but from May 29 the yield began to sink until at present it does not exceed about 12,000 poods. Analysis has shown that the naphtha contains 4.5 per cent of paraffin, while previously Surakhany oil had not contained more than 2.75 per cent.

DENVER WOULD USE WELLINGTON DOME GAS

CASPER, Wyo., August 2.—Denver wants natural gas and would provide a good market for such a field as the Wellington Dome indicates. On the other hand, prominent oil operators consider there is a chance to the south in the merger recently made by the Prairie interests in Texas for gas lines and properties in that State. A line from the Amarillo Field to supply Pueblo, Colorado Springs, and Denver, has been talked of for several years. The Producers & Refiners Corp. was reported to be considering such a proposition before the merger with the Prairie and the plans embraced a main trunk line across Colorado that would be live at both ends, the Amarillo Field on the south and the Lost Soldier Field of Wyoming on the north.

The present gas lines in Wyoming link the Lost Soldier, Salt Creek and Poison Spider Fields, while a lateral of 65 miles would connect the Sand Draw Field in Fremont County with the Lost Soldier end of the Producers & Refiners present system. The Poison Spider and Boone Dome gas line is owned by the New York Oil Co. and the Casper to Salt Creek gas line is the property of the Midwest Refining Co. The Producers & Refiners Corp. owns the line from Casper to the Lost Soldier, also the Sand Draw to Riverton and Lander system. The latter firm recently completed a contract with the Hatfield Oil Co. by which the Producers & Refiners takes over the gas produced on this new structure south of

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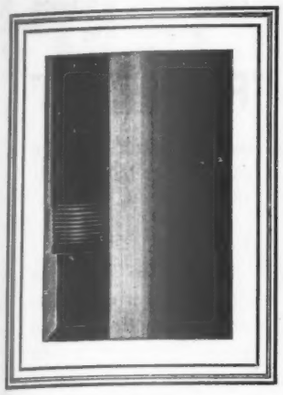

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Rawlins, Wyo. The Eight Mile Lake Dome now has two gas wells and the Hatfield Oil Co. is drilling the second well to the Dakota sand for a complete test. The present gas production in the second well was found in the Mowry shale.

SOUTH INDIA DEPENDS ON BURMAH AND U. S.

South India depends solely on the following countries for its supply of mineral oils: Burma, United States, Straits Settlements, and Persia, named in the order of the importance of their contributions. During the quarter ended March 31, 1924, the total of all kinds of mineral oils imported into Madras and other ports of South India amounted to 12,602,282 imperial gallons, which established a record increase compared with 10,761,119 gallons, imported during the preceding quarter.

Burma and the United States are the principal purveyors of kerosene oil upon the South Indian market. Burmese kerosene being imported in bulk and tinned locally, while American kerosene is received both in bulk and in tins. During the first quarter of 1924 there were imported 8,267,347 imperial gallons from Burma, and from the United States 1,817,768 gallons in bulk and 31,186 gallons in cases—a total of 10,116,301 imperial gallons of kerosene.

A single American concern, with an extensive organization throughout South India, imports all American kerosene oil used in this section, while the local trade in kerosene from Burma is shared by two British companies. It is understood that these British companies receive their supplies from the same refineries in Burma although they are sold locally under different trade names. The local wholesale prices range, according to quality, from $1.50 to $2.90 per case of 8 imperial gallons.

TOO QUICK TO DRILL, SAYS C. C. HERNDON

"The trouble with the oil industry is that the minute good times start coming about, the men engaged in it set about to destroy rather than to enjoy the prosperity by again starting up drilling and increasing crude production," says C. C. Herndon, vice president of Skelly Oil Co.

Mr. Herndon is of the opinion that a restraint on all except the necessary drilling activity should be practiced just the same when the oil industry emerges from its present depression as is now starting to be practiced. "We are entitled to a year of prosperity and the way to make it certain is to curtail drilling even when production is down and prices are favorable," he says.

Mr. Herndon says he and his company are in business to show a profit rather than to just produce oil in large quantities. He adds: "We would rather produce 10,000 bbls. daily and show a profit than to produce 20,000 bbls. and not make a profit. In other words, we are not in business for our health but for the benefit of stockholders." He says Skelly has curtailed drilling to the very minimum, the company now having 18 wells drilling, all of which are in defense of property lines.

OIL MAN UNDERGOES SERIAL OPERATIONS

CAMBRIDGE SPRINGS, Pa., August 2.—R. C. Troutner of this resort is recovering from a remarkable operation performed at the University Hospital, Philadelphia. Suffering from a tumor of the brain and given up by specialists in Fort Wayne, he underwent three operations. In one, part of the skull was removed. In another, part of the thigh was taken out to replace the bone in the skull. In the third the patient's son submitted to a blood transfusion.

Mr. Troutner was only recently placed on the pension list of the Indiana Pipe Line Co., after 30 years' of service. He is well known throughout the oil country.

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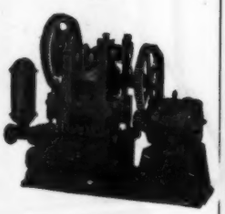

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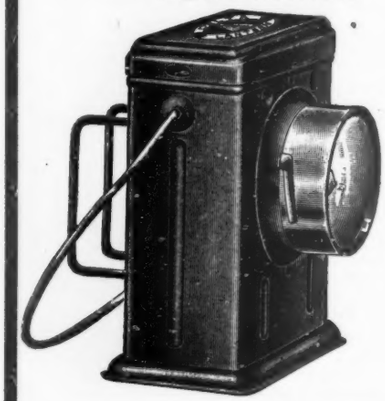

Burns continuously by the hour. Runs on two common No. 6 dry cells. One pair of batteries good from five months to one year.

Takes place of dangerous oil, gas and other unsafe lights. Throws powerful light 400 to 500 feet. No danger of fire. Safe anywhere.

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AND HOLLOW BALLS

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ANN ARBOR, MICH.

SIGNIFICANCE OF LARGE OIL FIELDS

(Continued from Page 21)

be considered one cycle in point of time and productive effort, although the fields that have poured out their floods of oil are widely separated: California Wyoming, northern Oklahoma, Arkansas and east central Texas.

Never before in the history of oil have 15 great fields reached their peak of production within a period of a few years and eight of them in one year, and if we consider the fields from the standpoint of their total production to the end of 1923 we find, by referring to Table 2 that five heavy oil fields produced 220,000,000 bbls, while 10 light oil fields produced 539,000,000 bbls.

It has been estimated that over 650,000 wells have been drilled in the United States and that there are today about 290,000 producing wells.

The total number of wells in the above 15 fields would aggregate only a small part of the 290,000—the remainder of the wells in the United States being small and averaging only a few barrels a day. While Salt Creek had produced some oil for a number of years, almost all of its oil has been produced since the beginning of 1920. Of the other 14 fields practically all of their oil has been produced since the beginning of 1920—and the greater part of it in the last two years.

The total production for the entire United States for the four years from Jan. 1, 1920 to Dec. 31, 1923 was 2,212,000,000 bbls, hence these 15 fields produced over 34 per cent of the total oil produced in the United States during the same 4-year period.

Produced Half the Oil

In the year 1923 the United States produced 739,000,000 barrels of oil, of which the foregoing 15 fields produced 403,000,000 bbls., or slightly more than 54 per cent.

Summarizing the 40 fields which in the aggregate have produced over 50 per cent of the oil in the United States, a few interesting conclusion can be reached.

The flood from the old Bradford Field struck the market 20 years ahead of the automobile industry and at a time when kerosene was the major product refined from crude oil.

The eight great Gulf Coast fields that have produced an aggregate of 389,000,000 bbls. should not have had a serious direct influence on the market, as they contributed little from a gasoline sandpoint. They did, however, cause a tremendous "backing up" of fuel oil in storage and thereby indirectly exterted a very marked influence on the general market.

The seven great fields in the San Joaquin Valley, California, which have produced an aggregate of 1,151,000,000 bbls. of oil, have never seriously affected the Pacific Coast gasoline market, as practically all of their oil is low gravity, with little gasoline.

To a large degree the same thing can be said of the earlier production from the four Los Angeles Basin fields: Salt Lake, Coyote, Montebello and Fullerton, that have produced an aggregate of about 297,000,000 bbls.

Crude from the Santa Maria Field will be fractionate about 20 per cent gasoline, hence this field's 112,000,000 bbls. has been a factor in California's gasoline situation.

Production Classified

As gasoline is today the major product product obtained from crude oil, the crude production of the entire United States can be roughly classified under two general heads—that with a substantial gasoline content and that with a small or negligible gasoline content.

In this connection it is well to bear in mind that cracking processes were not originally intended to crack "gasolineless" crude oil, but gas oil from the higher gravity crudes.

While it is true that 40,000,000 bbls. of gasoline, or about 21 per cent of our total production was obtained by cracking, it is probably true that very little

There are three definite reasons why

"PALMETTO"

outlasts other packings even under hard conditions:

FIRST:

"Palmetto" is made up in a layer upon layer construction, which gives it great tensile strength.

SECOND:

It has graphite grease lubricant forced hot into each single strand before braiding, and not dipped into lubricant after braiding, as other packings.

THIRD:

The long fiber asbestos of which it is made gives each single strand great tensile strength. Test a strand yourself.

Let us prove "Palmetto's" long life in service with working samples—no charge.

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came from cracking heavy crudes and practically all from cracking kerosene, gas oil and fuel oil after the higher gravity crudes had gone through the fractionating stills.

Another reason is that during the last few years and especially 1923, high gravity crude has been so plentiful that in order to save everything possible of its lighter fractions the practice was very generally followed of promptly putting the high gravity crudes through the stills and storing the low gravity crudes which obviously contained little gasoline that could be evaporated.

Table 2 has been condensed from Table 1 and groups the 40 big fields of the United States under the two general heads—light oil fields and heavy oil fields. In order to emphasize the recent great change from heavy oil classification to light oil production, the classification has been subdivided into those fields discovered before 1900, those from 1900 to 1920 and those after 1920.

Heavy and Light Output

Of the fields discovered before 1920, it is interesting to note that California's 10 heavy oil fields (see Table 2) produced about 1,403,000 bbls, while here one light oil field, Santa Maria, produced a total of 112,000,000 bbls. On the other hand, of California's fields discovered after 1920 the three great light oil fields have produced a total of 227,000,000 bbls., while her one heavy oil field has produced 45,000,000 bbls.

In the Mid-Continent the seven heavy oil fields discovered before 1920 produced 434,000,000 bbls, while the six light oil fields produced 938,000,000 bbls. After 1920 the four heavy oil fields produced 175,000,000 bbls, while the six light oil fields produced 217,000,000 bbls. Set up in a table, the relative production looks like this:

	Before 1920	
Area—	Heavy	Light
Midcontinent.	7- 434,000,000	6-938,000,000
California ..	10-1,403,000,000	1-112,000,000
	After 1920	
Area—	Heavy	Light
Midcontinent...	4-175,000,000	6-217,000,000
California	1- 45,000,000	3-227,000,000

The big fields of California have produced 1,448,000,000 bbls of oil that can be roughly classed as heavy oil and 339,000,000 bbls of light oil. The big fields of the Mid-Continent have produced 609,000,000 bbls of heavy oil and 1,155,000,000 bbls of light oil.

California's big fields have not only produced more than twice as much heavy oil as the Mid-Continent and Gulf Coast combined, but her new big light oil fields, discovered during the last four years, have produced slightly more oil than the new big light oil fields discovered in the Mid-Continent. Full consideration, however, must be given to the fact that aside from the three recent big fields, California has little light oil production, while the Mid-Continent has a very large light oil production from tens of thousands of small wells, some of which have been producing for 20 years. Regardless of these facts, the last four years have demonstrated that we have definitely entered a cycle in which the proportion of light oil will be much larger than it has been in the past. The fact that practically all of the oil from the Rock Mountain area and all of the oil produced east of the Mississippi River is light oil only emphasizes the changed conditions that have come about in the producing end of the industry in the last few years.

Three Times as Much Motor Fuel

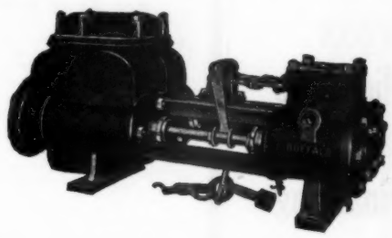
The great increase, both in quantity and in the proportion of high gravity crude oil that we are now producing, taken in connection with the great increase in cracking plants and the marvelous increase in the production of natural (casinghead) gasoline, create a situation that is of tremendous significance to both the refiner and the producer of crude oil.

It is significent to the refiner because today, from the same number of barrels of high gravity crude oil it is possible by better distillation, by cracking and by blending to make almost three times as much motor fuel as was made 10 years ago—to say nothing of the motor fuel that can be "cracked out" of heavy oil.

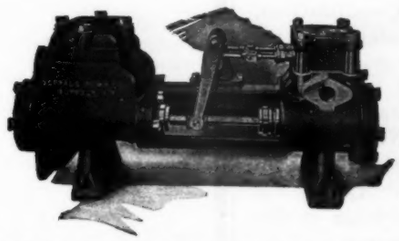
And this situation is especially significent to the producer of crude oil be-

BUFFALO Pumps Are In Stock Near Oil Fields

You can get these piston packed pumps for general service requiring up to 150 lbs. pressure.



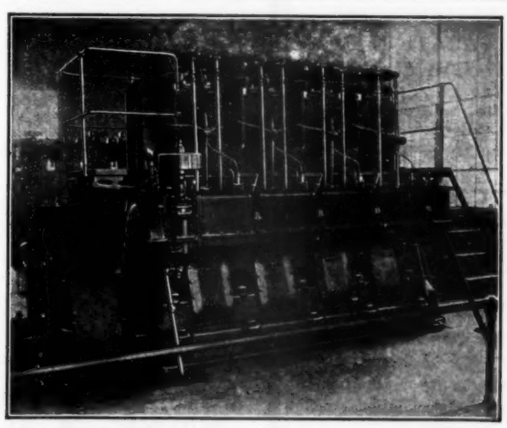
Brass lined water cylinders; bronze disc valves; steel or bronze rods and valve gear.



BUFFALO STEAM PUMP COMPANY

174 Mortimer St, Buffalo, N. Y.

Smith Booth Usher Co. Woodward Wight Co.
Los Angeles—San Francisco New Orleans



260 H. P. De La Vergne Diesel Type "SI" Engines
Two of these units are installed in the above plant, the Phipps Station, Marland Pipe Line Co., Ponca City, Okla.

DE LA VERGNE DIESEL OIL ENGINES

without air compressors
Thirty years experience in oil engine manufacture
330,000 horse power in operation
The Cheapest Dependable Power

Send for Bulletins

De La Vergne Machine Company
920 East 138th St., New York, N. Y.
Also Manufacturers of Ice Making and Refrigerating Machines

A Mark of Distinctive Service for Over a Quarter of a Century

—oOo—

Mergers Consolidations Re-Organizations New-Financing

We specialize as Advisors and Counsellors in Mergers, Consolidations, Re-organizations and New Financing.

This service offered by the GREENHALGH ORGANIZATION, is the result of over twenty-five years' experience in this line of endeavor.

(NOTE)
Capital Stock Tax Returns Must Be Filed on or Before September 30, 1924, in Accordance with Recent Ruling.

CONSULT US REGARDING THE PREPARATION OF THIS RETURN

Check the service in which you are interested and write us.

- ☐ Balance Sheet and Detailed Audits
- ☐ Special Investigations
- ☐ Refinery Cost Systems
- ☐ Systems for Producing Companies
- ☐ Advisors in Re-organizations, Mergers, Consolidations and New Financing
- ☐ Preparation Requirements for Listing Securities for Trading
- ☐ Preparation of Literature Concerning Public Offering of Securities
- ☐ Federal and State Income Tax Service

J. H. Greenhalgh & Company

Public Accountants

4403 Sheridan Road, Chicago

16 King St., London

cause years ago when "straight run" fractionation was the only method of producing motor fuel, the refiner leaned a great deal heavier on the producer and asked him for proportionately a great deal more crude oil than he is asking for today—or will ask in the future.

Some idea of what this may mean can be had by noting from Table 2 that Texas, Oklahoma, Arkansas and California have produced over 2,000,000,000 bbls. of heavy oil, a large part of which has been used as fuel oil and from which little gasoline has been obtained.

Big fields are not only symbolic of huge stocks of crude oil, but of huge stocks of refined products—and, regardless of the net result to the industry of an overproduction of crude and refined, the fact remains that the public has been, and will continue to be, the greatest beneficiary of that condition.

TABLE NO. 1
Forty Big Oil Fields of the United States With Approximate Total Production to January 1, 1924

	Field—	Intensive Development	Approximate Production
Eastern area—			
Pennsylvania	Bradford	1878-1888	235,000,000
Mid-Continent area—			
Kansas	El Dorado	from 1917	165,000,000
Oklahoma	Glenn Pool	1906-1907	170,000,000
	Cushing	1914-1915	280,000,000
	Healdton	1917	125,000,000
	Burbank	1921-1923	60,000,000
	Tonkawa	1922-1923	30,000,000
Texas	Spindletop	1902	48,000,000
	Sour Lake	1903-1904	64,000,000
	Batson	1904	32,000,000
	Saratoga	1905-1907	24,000,000
	Humble	05 & 16-16	93,000,000
	Goose Creek	1917-1919	48,000,000
	Hull	1921-1922	30,000,000
	West Columbia	1919-1922	50,000,000
	Wichita County	1918-1921	182,000,000
	Eastland County	1919-1920	50,000,000
	Stephens County	1920-1921	91,000,000
	Mexia	1922-1923	60,000,000
	Powel	1923	32,000,000
Arkansas	El Dorado	1921-1923	30,000,000
	Smackover	1922-1923	35,000,000
Louisiana	Homer	1920	40,000,000
	Haynesville	1922	25,000,000
Rocky Mountain area—			
Wyoming	Salt Creek	1922-1923	95,000,000
Pacific Coast area—			
California	Kern River	1903-1912	242,000,000
	McKittrick	from 1907	67,000,000
	Midway	from 1911	377,000,000
	Sunset	1914	98,000,000
	Coalinga	1907-1921	272,000,000
	Lost Hills	1916-1917	50,000,000
	Elk Hills	1921-1922	45,000,000
	Santa Maria	1906-1912	112,000,000
	Salt Lake	1907-1912	58,000,000
	Fullerton	1908-1916	101,000,000
	Coyote	1917-1919	87,000,000
	Montebello	1919-1920	51,000,000
	Santa Fe Springs	1922-1923	92,000,000
	Huntington Beach	1922-1923	48,000,000
	Long Beach	1922-1923	87,000,000
Total 40 fields			3,881,000,000

TABLE NO. 2
Light and Heavy Oil Fields Discovered Before 1900, From 1900 to 1920, and After 1920

		Name—	Fields	Barrels
Before 1900—	Light Oil:	Bradford	1	235,000,000
From 1900 to 1920—	Light Oil:	El Dorado (Kans.)	1	165,000,000
		Oklahoma	2	450,000,000
		Texas	3	323,000,000
		Santa Maria	1	112,000,000
			7	1,050,000,000
	Heavy Oil:	Texas	6	309,000,000
		Healdton	1	125,000,000
		San Joaquin Valley	6	1,106,000,000
		Los Angeles Basin	4	297,000,000
			17	1,837,000,000
After 1920—	Heavy Oil:	West Columbia	1	50,000,000
		Hull	1	30,000,000
		Mexia	1	60,000,000
		Smackover	1	35,000,000
		Elk Hills	1	45,000,000
			5	220,000,000
	Light Oil:	El Dorado (Ark.)	1	30,000,000
		Burbank	1	60,000,000
		Tonkawa	1	30,000,000
		Homer	1	40,000,000
		Haynesville	1	25,000,000
		Powell	1	32,000,000
		Santa Fe Springs	1	52,000,000
		Huntington Beach	1	48,000,000
		Long Beach	1	87,000,000
		Salt Creek	1	95,000,000
			10	539,000,000
Grand totals:	Heavy oil fields		22	2,057,000,000
	Light oil fields		18	1,824,000,000
			40	3,881,000,000

ARTESIA, N. M., CONSIDERS BUILDING OF REFINERY

ARTESIA, N. M., Aug. 2.—A proposition submitted by Van S. Welch and associates of the Illinois Producers Co., for locating a refinery at this place with pipe line connection to the adjacent field, conditioned upon a subscription bonus from Artesia of $22,000 has been taken up in earnest by the Commercial Club and citizens, and the latesest report indicates that the greater part of the amount has been subscribed. The committee is still working to secure the sum required.

Interest in development west of the river is now largely centered in the Howard operations, south of Artesia, near the village of Dayton. The new well, recently spudded in is near the Hawkins No. 1, now on the pump. The Oscar R. Howard Co. has recently incorporated in New Mexico with a large capitalization, and is now operating the Hawkins (Eureka) properties and acquired acreage.

This company is also drilling east of the river on the Etz permit, in Section 22, Township 18-27. Oil sand with a showing of gas was encountered at 450 feet, and again at 610 feet, the present depth.

TANKERS AT LOS ANGELES

LOS ANGELES, Cal., August 2.—The entry of a new fleet of French tankers to carry California petroleum products to foreign ports was signalized by the departure of the Melpomene of the Compagnie Auxiliarie de Navigacion of Paris with 75,000 bbls. of gasoline loaded at the Shell company's Los Angeles harbor terminal. A second tanker of this fleet was loading a like amount of kerosene for China at the Standard Oil Co.'s San Francisco docks. The shipping company has five other new tankers which have been commissioned to carry California oil to various parts of the world. The Union Oil Co. of California also loaded out 70,000 bbls. of kerosene for delivery in the Orient on the British tanker Natica.

BAKER CASING SHOE CO.

Box 264 F Huntington Park Sta. LOS ANGELES, CALIF., and Box 239 F COALINGA, CALIF.

MANUFACTURERS AND DEALERS

Oil Well Specialties for Advanced Methods Practical and Dependable

BAKER

Anchor Wall Packers
Baker Casing Shoes
Bridge Builders
Cement Retainers
Cement Plugs
Clean-Out Bailers
Dump Bailers
Die Nipples Water
Die Collars Tight
Gas Traps
Hinged Spiders
Heaving Plugs
Pitman Ends
Plain Casing Shoes
Regular Hook Wall Packers
Release Hook Wall Packers
Rotary Bits Baker Type
Rotary Hole Guides
Rotary Shoes
Rotary Tool Joints
Rotary Wall Hooks
Split Shoe Guides

All Supply Houses or Direct

Good Service Pleasing

The excellent service rendered to the men of the industry by The Oil and Gas Journal Classified Wants Section is appreciated by them.

They use it as a direct medium to broadcast their wants to fellow readers who respectfully consider every advertisement in the Classified Wants Section.

Good machinery, tools, etc., are being kept in operation by reason of alert men buying and selling through the Classified Wants Section.

These men know that it is economically sound for a concern to sell good equipment that it cannot use. Therefore, thrifty executives use the Classified Wants Section as an economising move that is helpful to the entire industry.

Its absolute merit has made it the greatest petroleum publication classified section in the world.

THE OIL AND GAS JOURNAL

"Give It a Try"

THEY decided to "Give It a Try" and paid us $4.20 to insert their six-line advertisement in the Classified Section for one month.

Before the second appearance of their little advertisement they had received many orders. One was a $300 order—plus a promise of all future business.

It Certainly Paid Them to "Give It a Try"

We are glad of it as it is our desire to help everyone who wants to do business with the Petroleum Industry.

The Classified Section provides an excellent way of introducing you or your organization to the great Industry at a most reasonable cost.

However, cost is the least consideration. Results are what count. That's why The Oil and Gas Journal has the greatest Petroleum Classified Section in America.

Mail your advertisement today.

It will pay you to "Give It a Try"

Classified Wants Section

"Biggest in America"

APPLICATION OF ADVERTISING TO MARKETING PETROLEUM PRODUCTS

By A. M. Honnett

This article is intended to outline the practical application of some of the principles of advertising to oil merchandising along tried and proven lines, to point out which of the numerous phases of advertising are best adopted to the several petroleum markets; what advertising can be expected to accomplish in creating, developing and maintaining markets for petroleum products; what it cannot do, and some of the pitfalls to avoid.

The development of the markets for petroleum products has been so rapid compared to any other commodity it has been necessary for the industry to appropriate many unwieldly and ill adapted methods of meeting certain marketing and merchandising exigencies.

The markets for petroleum products can be placed under three general classifications, viz: 1, automotive; 2, industrial; 3, domestic. The automotive market has a number of pecularities when compared to the markets for other lines served by advertising.

Price Structure

First among the peculiarities of the market for automotive oils is its price structure. In no other commodity market is there an attempt to synchronize so closely the fluctuations of the retail prices with those of the wholesale markets and the varying influences of supply and demand.

This refers to the tank wagon prices for gasoline and kerosene on the one hand and the tank car or refinery prices on the other. The tank wagon price which constitutes both a retail and resale price governs the filling station price and often changes several times in a week.

That this condition has an important influence on the design of advertising for gasoline can be realized if we stop to consider the effect on the sale and advertising of food or clothing if there were an attempt to post and maintain retail prices in conformity with the price fluctuations of raw materials and supply and demand. Imagine a weekly fluctuation in the retail price of sugar, flour, woolens or furs. The wholesale markets for these products certainly have their frequent price fluctuations yet the comparative stability in the price of the finished product lends itself more readily to the tried principles of advertising. Think of a posted grocery store price for oatmeal fluctuating weekly; a weekly change in the retail price of writing paper or linoleum. The advertising problem for these products would certainly offer a changed aspect.

Consumption Independent of Advertising

The next important distinction of the automotive oil market is that the sum total of the consumption of automotive oils cannot be materially increased by sales or advertising effort. You can advertise fruit, breakfast food or garters and thereby materially increase consumption. You can make people eat more raisins, buy more automobiles, build more homes, take more trips and wear more furs by advertising, coupled with the proper sales effort; but you cannot make them burn more gasoline or use appreciably more lubricating oil by this means. True, the motor oil business benefits indirectly from automobile advertising, good roads propaganda and pleasure resort publicity but this is advertising with which the oil business is not directly concerned.

It is therefore necessary for automotive oil advertising to be confined almost exclusively to development of brand preference, and acceptance.

It would be useless for automotive oil advertising to extoll the advantages of burning gasoline or using lubricating oil. It could not even hope ot increase the popularity of motoring, but must content itself largely to appropriate business that would otherwise go to a competitor. This does not refer to the natural increase in consumption produced by such educational advertising as advocates a more frequent change of crank case oils, etc.

The third distinction of the automotive oil market is the fact that automotive oils are bought on the rund and out-of-doors. The buyer of lubricating oil or gasoline is always on his way to or from some place when he makes his purchase. He rarely if ever goes out of his way to buy oil or gasoline, partially perhaps because he does not have to. While he will walk blocks to buy his favorite cigar or a certain cigaret; will cross the town to his favorite restaurant or barber shop, he seldom goes to a service station to buy oil or gasoline. He nearly always goes by a service station to get oil or gasoline. There are, of course, exceptions to this statement but they are mostly occasioned by a habit formed as the result of acquaintance with certain filling station employes and satisfaction with their service.

The fourth feature of the automotive oil market which must come in for full consideration when contemplating the application of advertising to it, is that oil and gasoline are never bought for what they are but rather for what they will do. Pride of possession can never enter into the motives which actuate the purchase of motor oil or gasoline. The purchaser is proud of his piano, his watch, his pencil, his make of hat, or shoes or his brand of cigars but he seldom proclaims with pride the brand of gasoline or lubricating oil he uses. Even though refined from the choicest crudes in the most expensively equipped refineries by the highest paid experts, they are usually just lubricating oil and gasoline to him.

Bought Sight Unseen

A fifth peculiarity of motor oils which might have an important bearing on its advertising is that they are nearly always bought and used sight unseen. Recently the visible pump has brought gasoline into the vision of the buyer but this is for the purpose of showing him that he is getting full measure rather than to show him the product. There is no difference in the appearance of various gasolines and very little difference in the appearance of lubricating oils. Only the trained eye can recognize any difference and even with an expert a difference in appearance does not necessarily mean a difference in lubricating qualities.

One large company has, however, made a sales point of the color of its oil and gas by virtue of a consistent advertising campaign created a distinct preference among certain motorists for oils of a certain color. Thus advertising has countered one of the peculiarities of oil marketing and created a distinctiveness in product where no distinctiveness existed.

Perhaps all of these peculiarities can be annulled by proper treatment with the right kind of advertising. At any rate, they must be taken into full consideration when oil advertising is planned.

Consumer consciousness of motor oils is very sensitive to the right kind of advertising. Witness this sudden popularity of oils of a certain color following comparatively short consistent advertising. Because the consumer can't see it work or how it works he is much inclined to believe and remember what he reads about the modus operandi of lubricating oil.

These peculiarities of the market combine with certain distinctive peculiarities of the existing marketing units to provide a unique field for the application of advertising.

The Oil Jobber

The principal difference in the marketing unit is the province of the oil jobber. An oil jobber is in most cases a retailer as well as distributor of oils for resale. In many cases he actually competes with the dealer he sells. Most so-called oil jobbers operate an extensive retail distributing system including tank wagons, service stations and curb pumps. Their tank trucks in addition to serving their farm trade direct also deliver gasoline to dealers and garages who operate service stations or curb pumps. The principal requirement of an oil jobber is that he have storage tanks located on

(Continued on Page 138)

A Combination That's Hard To Beat

The TRIMO Pipe Cutter And The New TRIMO Thin Wheel

Once you've used a TRIMO Pipe Cutter you'll never be without this handy efficient tool when there's pipe-fitting or quick repair work to do.

WARNING!

Imitators are attempting to deceive you by illegal use of the TRIMO name in connection with cutting wheels. Only the TRIMO Thin Wheel gives the efficiency and service you have a right to expect. The name TRIMO is stamped on the hub of every genuine TRIMO Wheel. Insist on the genuine!

The Genuine TRIMO Thin Cutting Wheel

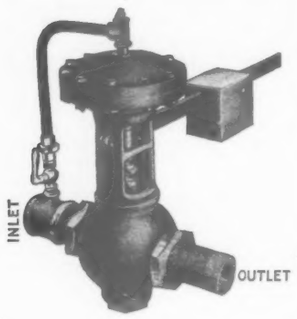
TRIMONT MFG. CO.
Roxbury, Mass.

TRIMO

7095

A Safeguard for Your Gas Lines

Fulton Back Pressure Regulator

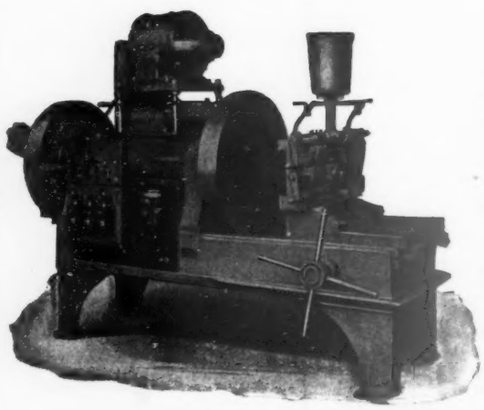


Set the Fulton Back or Check Pressure Regulator at the desired pressure, and it automatically guards against the gas pressure falling below this predetermined pressure, maintains given pressure at gas wells. So made that friction is reduced and a quick response to the slightest change of pressure is insured.

Write us for folder giving full information and prices.

THE CHAPLIN-FULTON MFG. CO.
30 Penn Avenue Pittsburgh, Pa.

Pipe Cutting and Threading Machinery



The oil business is one of heavy duty therefore requires heavy duty machines. We have them.

Sizes up to and including 24″

Belt, Motor or Steam Engine Driven
Also
Equipped for Gasoline Engine Drive

THE COX & SONS COMPANY
BRIDGETON, NEW JERSEY
Business Established 1868

Motor Check Tests Diagnose Ailments Prove Oil Is Power

A new invention which, it is said, tells as much about an automobile as the stethoscope does about the human body is now being used in a number of cities to diagnose motor ailments.

This machine is known as the Wasson Motor Check, which, without loosening a bolt, tests every running part of a car, telling what the car can actually do in horsepower, how much unexploded charge is slipping by the pistons, what shape the rings are in, whether it is using the right grade of oil, what the gas consumption is, etc.

The Indian Refining Co. is introducing the motor check as part of its national educational campaign to prove to the motorist that oil is more than a lubricant—that it has a vital relation to power.

This "power idea" in oil which the Indian Refining Co. has added to the automotive vocabulary is the result of the motor check. Until one day last fall, oil was discussed in terms of "viscosity," "body," "high temperature," et al. On the day in question, R. W. Wasson, automotive engineer of Newark, N. J., was experimenting with his new invention—the motor check, and it was suddenly proved to him that oil was more than merely a lubricant, but was a power accelerator. Hearing of this automotive discovery, the Indian Refining Co. sent to Newark some of its engineers, who after a demonstration recommended that the Indian Refining Co. secure the oil-testing rights to the Wasson invention.

One of the first motor checks was installed at the Indian Refinery, Lawrenceville, Ill. Here for months the Indian engineers, under the supervision of J. E. Lockhart, oil chemist, experimented with all sorts of cars and all kinds of oils, under all sorts of running conditions.

When they had proved after hundreds of tests that the right oil really means more power to a motor, the Indian company decided to launch a national educational campaign to prove—not that its product was the best or to discredit any other oil, but simply to show the motorist that by using the right oil for his motor and by observing a regular changing period, he would get more power.

At the testing station, the motorist has his crankcase drained and flushed. It is filled with the grade of oil which the engineers conducting the test deem right for the motor of his car. A power test is taken to show the exact horse power his motor develops at the rear wheels, from low speed to the best it can do. Then a gasometer test is taken to show the amount of slippage of unexploded gasoline past his pistons, causing loss of power and dilution of oil. A record sheet is made and given to the motorist.

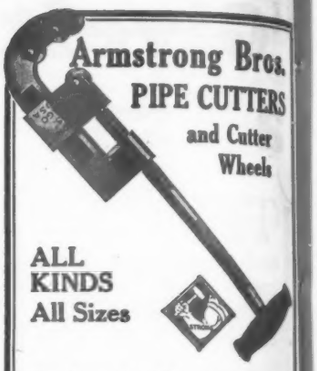
Then after the car owner has driven a few hundred miles, he is invited to come back for a second test to show how the oil is holding the power. The engineer gives the motorist specific recommendations for his car, showing what grade of oil is best suited for his car as it is, and how often he should change the oil in his crankcase.

In New York, Indianapolis, Terre Haute, Washington, Memphis, Fort Wayne and other cities where the Indian Refining Co. has installed motor checks, thousands of car owners have had their cars tested, and have proved to themselves that "oil is more than oil—it is power."

TEXAS PRODUCTION

AUSTIN, Tex., August 2.—The Texas Co. produced 2,624,810 bbls. of crude oil during the three months ending June 30, according to report to the comptroller's office accompanying a gross production remittance check ofr $110,000. Value of the oil produced by The Texas Co. was $5,112,960, according to the report.

Armstrong Bros. PIPE CUTTERS and Cutter Wheels



ALL KINDS All Sizes

Equipped with Armstrong Bros. Improved Knife Blade Cutter Wheels made from ALLOY TOOL STEEL.

Write for free catalog

ARMSTRONG BROS. TOOL CO.
330 No. Francisco Ave. Chicago, U.S.A.

GURLEY

The Oil Man's Standard in ENGINEERING INSTRUMENTS
Since 1845
W. & L. E. GURLEY Troy, N.Y.

Kesselman & Co.

Manufacturers of

Drilling and Fishing Tools

for Oil, Gas and Artesian Wells.

Parkersburg, W. Va., Butler, Pa.

PRODUCERS AND REFINERS CORPORATION
Producers—Refiners—Marketers
"A Dependable Source of Supply"
Denver
Chicago
Tulsa
Memphis
Waterloo
Omaha
Salt Lake City

ESTABLISH

yourself with the petroleum industry through an established petroleum publication.
The Classified Wants Section provides an excellent means of introducing your organization to the young but powerful industry at a most reasonable cost.
The proof is in this week's Journal. Turn to the Classified Wants Section now.

The Oil and Gas Journal

McGREGOR

"The Working Barrel that Works"

Over fifty thousand now in use from Pennsylvania to Argentine and from Oklahoma to India wherever oil is produced.

No Barrel can compete with the McGregor in price. It comes with the barrel, valves, valve stem all complete at a price slightly more than what the old style Barrel would cost.

The only pulling done when you have a McGregor in use is the rods as the complete Barrel is fastened to the rods and comes out when they are pulled. TUBING PULLING is done away with as far as the Working Barrel is concerned. Use "Mac" Ball and Seat.

See your dealer or write us for circular

Patent

McGREGOR WORKING BARREL CO., Inc.
Sole Manufacturers
BRADFORD, PENNA.

TANKS!

Posted buyers have made their headquarters here. Whether your requirements are large or small, you will find our gigantic stocks complete with America's best values.

Just now we are equipped to supply vertical and horizontal storage tanks in practically every desired small, medium and large size, up to 30,000 gallons.

Give us a description of the tanks you require and our low money saving prices will quickly follow.

PIPE!!
VALVES AND FITTINGS

Pipe, valves and fittings of every kind in all sizes are being constantly sold at smashing low prices. The next time you need anything in this line, make it a point to send full particulars direct to

Harris Brothers Co.
33th and Iron Streets, Chicago

Structure Drilling
Contractors With
The Diamond Core Drill
Wire or write us your wants.
Diamond Drilling & Exploration Co.
Pittsburgh, Pa.

OIL COMPANIES FIGHT HIGHER ASSESSMENTS

LOS ANGELES, Cal., August 2.—Protest of oil operators before the Board of Equalization and suits brought to restrain enforcement or asserted arbitrary and exorbitant assessments are expected to meet with success. It is expected Los Angeles County officials will announce that a 30 per cent decrease in assessments of properties at Signal Hill and 25 per cent at Santa Fe Springs will be approved. These decreases are said to be satisfactory to a considerable number of operators. In addition it is said special consideration is to be given to many cases, so that the whole question of taxation for this year will be amicably settled. At the same time the county assessor of Orange County has tentatively agreed to a 10 per cent decrease in assessments.

Operators are weary of the recurrence of the troublesome question each year and will come together to take steps to formulate an organization for the study of the whole tax question during the coming months in an effort to evolve some plan acceptable to both operators and county officials. By this means it is hoped a more equitable form of taxation may be worked out. One big corporation is averse to entering into any sort of agreement, but most of the big companies believe it will save them thousands annually.

Standard Oil Co. of California has protested against the assessments made on the famous Tupman lease in Kern County. The assessors placed the valuation at $8,665,600. Standard insists that the property, which is in Section 36-30-24, should be assessed at not more than $4,000,000. The board took the whole protest under advisement, as it did with several other operators who have protested their Kern County assessments.

SHELL CO.'S PROFITS 1.8 CENTS A GALLON

"Shell's annual profits from all sources accumulated together and expressed in terms of production represent an average annual profit of about three farthings (1.8 cents) a gallon." Sir Robert Waley Cohen, managing editor of Shell, says.

He reached this figure, he said, by subtracting gross costs from gross earnings and dividing the difference by the total number of gallons of oil of all kinds handled by the Shell concerns.

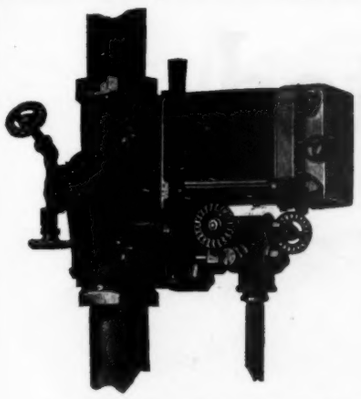
Profits are lowest on crude. Sir Henry Deterding puts earnings from fuel oil at 60 per cent of the total. Sir Robert indicated that crude is handled with a very small margin of profit, while the balance of 1.8 cents is reached by including larger profits from refined products.

"The 1.8 cents profits," he said, "is throwing in profits on purchased oil, profits on colossal fleets, interest on all the capital invested in tank installations, in lands held throughout every country and in the great and costly distributing organizations which have been developed in every consuming country."

When asked whether Shell intends to extend holdings in California after so successful an output in 1923, Sir Robert replied with the generality that "an oil company like ours never stands still."

JAPAN ASKS SAGHALIN OIL

The conditions under which Japan would be willing to recognize Soviet Russia, decided on by the Cabinet at Tokio include, it is stated, a 55-year concession for oil, coal and timber on the Island of Saghalin and the exploitation by a Japanese company of the oil of the island, Russia sharing in the profits, the percentage to be decided later. It is confirmed that Japan will not ask for any concessions on the Siberian mainland for the present. The chances of an agreement, it is believed, have been very greatly improved by the new policy outlined by Baron Shidehara, the Japanese Foreign Minister, and accepted by the cabinet.



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One electric motor operates both the fuel and the air valves. The sturdy and simple Bristol design and construction provides a positive and close control that is complete assurance of highly efficient fuel utilization.

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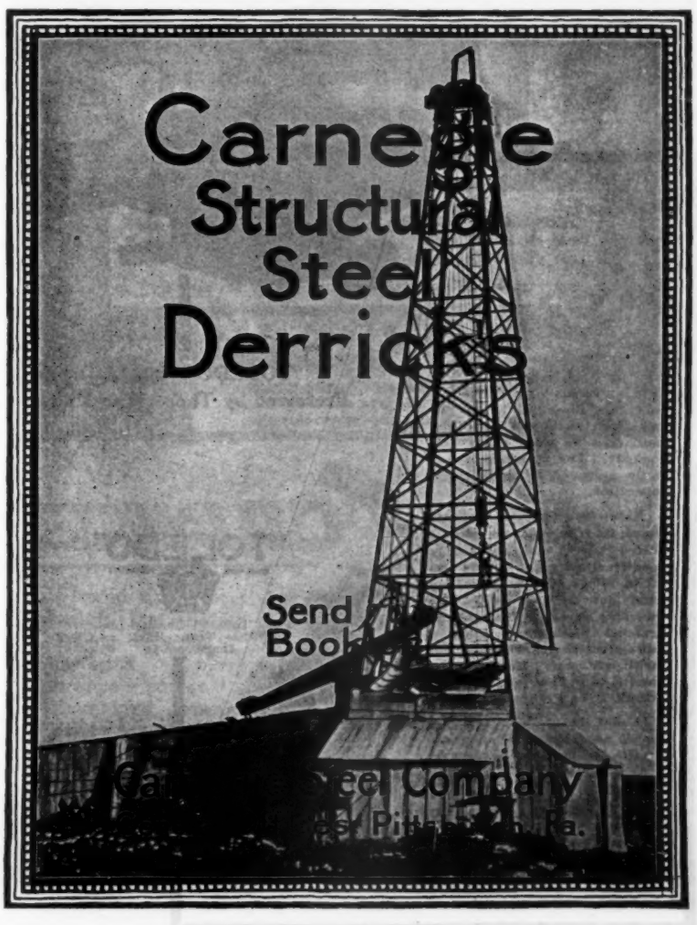

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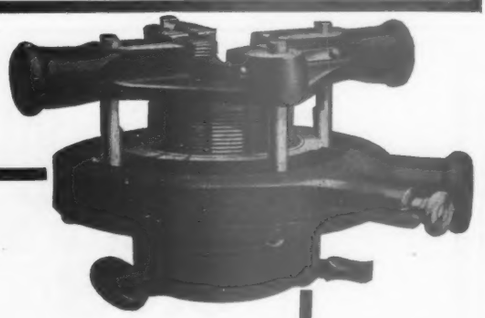

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Note its clean-cut appearance, its freedom from complicated parts, and its sturdy construction, yet it weighs less than 18 lbs as it is picked up and put on the pipe. The working parts are few and the ratchet mechanism is in a dirt-proof case. The dies cut with customary "Toledo" ease, and it is the easiest to operate of all 1" to 2" threaders.

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New York office, 50 Church St.

"TOLEDO"

For "Toledo" Quality Look for This Trade-Mark and Insist on It

ADVERTISING POINTS IN OIL MARKETING

(Continued from Page 135)

the railroad track so he can take and distribute at least a carload of gasoline and kerosene.

A large number of oil jobbers started in business with no other assets than two 10,000-gallon storage tanks and a tank truck usually bought on evry liberal credit terms. This equipment represents an investment of perhaps $3,000 and can often be paid for out of the first year's profits. If in a fairly good farming community away from heavy competition and under normal price conditions he is able to sell direct to farmers within a radius of 12 to 15 miles an average of 500 gallons of gasoline and kerosene per day. Such a volume should pay him a gross profit of $600 per month out of which he will disbure $50 for interest, depreciation and taxes; $250 to pay for his equipment or place in reserve and $300 for personal salary and operating expenses. He does not have to concern himself with either wholesale or retail prices. They are as definitely posted as the price of liberty bonds and unless there is extreme competition where the existing price structure is destroyed he sails smoothly along with an established margin between his cost and selling price of from 4 to 6 cents. If he desires to do so, he can even buy his stock on a basis of margin between cost and selling price or at a definite price under the posted retail tank wagon price. A great many refineries are offering gasoline or kerosene to their trade under what are called marginal contracts. contracts.

Attractive Business

Such conditions offer an inviting prospect to the man willing to work hard and long hours, to start into a business of his own with little or no capital. In the course of a year or 18 months he may have paid for his investment out of his profits. At this stage he commences to have visions of an expanding business. His rate of income permits him to add to his investment at the rate of some two or three hundred dollars per month. He learns that he can dispose of a larger gallonage of gasoline if he can shorten his haul. Naturally the garage or curb pump attracts him. He finds, however, that this business is not so easily secured as that of the farmer. He must make concessions to get it—his competition makes this necessary. The most common inducement or concession is to furnish the pump which means an investment of some two or three hundred dollars. To the jobber this does not look unattractive. His income will warrant the investment and if the investment will increase his gallonage and shorten his labors why not take it. So the jobber actually becomes a jobber in the accepted sense of the word and sells to dealers for resale. It is an easy transition from this stage to the ownership of drive-in filling stations and soon the tank wagon peddler owns a string of filling stations and perhaps three or four trucks and serves in addition to the farm trade, quite a sizeable tourist and town trade, through his own filling stations. He still retains the name of jobber and to the oil business he is a jobber, but in commercial nomenclature such a business would come much more under the head of small chain store classification than than of jobbers. The volume of his sales to dealers is only a small part of his total volume.

It is at this stage of the game that our newly made oil mechant commences to suffer some of the reverses that are so common in the marketing end of the oil business. It is here that he feels the need of more experience in th business which he has entered. He soon finds out that the filling station business is not a money-making venture like the tank station business.

With increased overhead and added leaks, all of the profit he can make from his tank station gets away from him in most cases through his filling station. Oftimes it happens he either fails in business or sells out at a loss long before he gets enough experience to learn how to overcome the losses.

Well Shooting By Experts

Call any of these men and have your well shot by an expert using the best material:

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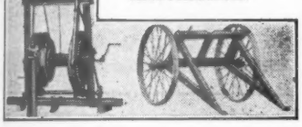

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Of course money must be made out of the filling stations but not by the inexperienced. A new filling station particularly is a hard proposition to handle on a money-making basis even by the most experienced operators. To look upon the oil marketing business as an easy road to wealth is a very serious mistake.

There is, however, another class of automotive oil distributor. He is called a wholesale marketer and usually enters the business as a broker of tank car shipments. He very often comes into possession of distributing properties such as bulk stations and tank trucks and filling stations at some stage in his business career, and so comes under the classification of the jobber that has been described. We have gone into a more or less lengthly and detail outline of the business policies, equipment, antecedents and proclivities of the bulk or tank station owner because the bulk station from which are distributed to the service station pump farmer, oil and gasoline is the key point of the automotive oil marketing system now in vogue in this country. All sales and advertising activities center around those points of distribution and without a fundamental knowledge of their function, efforts to apply advertising or oil marketing would be at sea.

It is readily concluded that the refiner who desires to expand and develop his market for automotive oils by the use of sales and advertising effort has a very distinctive sales and advertising problem for solution.

His product for the automotive trade if he has a complete refinery is lubricating oil and gasoline. His ultimate market is the automobile truck and tractor. His first problem is to distinguish his product by means of a trade mark or brand from competitive products. The usual factors which enter into the proper design of trade marks should be given consideration. Application of design to various sized containers from half gallon cans to tank cars and trucks. Individuality, color combinations and appropriateness of design. Registrability should also receive proper consideration.

Stressing the Brand

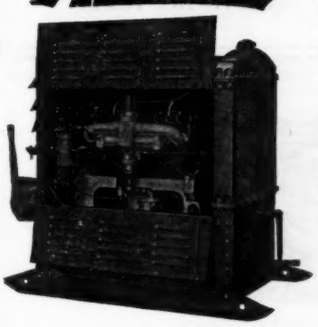
Almost every refiner's lubricating oil has some distinctive quality to the trained technical mind will serve to differentiate it from competitive products. This individuality in each refiner's product has led to a common and serious mistake in their advertising. Because of this technical difference they have tried to inject the advantages of these differences into their advertising and sales talks. As a matter of facts, these differences are purely technical and mean little or nothing as far as the real service value of the oils are concerned. It is practically impossible to get the consumer to understand or even become conscious of the advantages of these distinctions. The exploitation of these distinctions in the shape of advantages or superiorities are only confusing to the motorist and any constructive work that is done in this direction by one refiner is rapidly undone by another.

For example, one refiner by the use of well known and excellent advertising methods builds a preferential acceptance and perhaps a demand for pale oils. Another refiner by use of similar methods builds an acceptance for high gravity oils. Along comes a third refiner and preaches that neither high gravity nor paleness constitute a virtue; oils should be unblended, straight run products. Another group loudly extoll paraffin base. A much more effective way to create brand preference or acceptance is by the use of the old time tried method of creating familiarity. Make the consumer prefer A. B. C. brand oils in the same manner that they were made to prefer the pies that mother made. Make them familiar with the brand by repeatedly placing it before their vision as well as their mind's eye. Say A. B. C. to them again and again. Show them A. B. C. again and again. Then they will naturally, though subconsciously, become familiar with A. B. C. and just as naturally come to prefer A. B. C. And they won't know why and you won't have to tell them why. Which is a good thing because you would likely find it hard to do.

EQUIPPED WITH RICARDO CYLINDER HEAD

Right: The Power Take-Off
Below: The Industrial Unit

Waukesha
TRADE MARK



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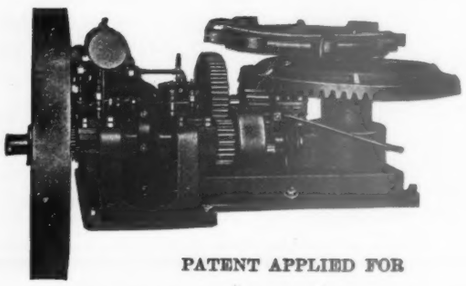

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WHEN OIL WORLD FIRST STARTED TOWARD WEST

(Continued from Page 28)

Brownyar & Martin were the drillers, and it is said that their contract was a rather sporting proposition. They were to get $10,000 if enough gas were found to supply the steam power needs of the mill, and nothing if they failed to do so.

Lima's First Well

They found practically no gas and not very much oil. Mr. Faurot had made them advances for the purpose of prosecuting the drilling that they were unable to repay, so it is said that he took over their tools to make himself good.

A second well known as "Citizens' No. 1" was quickly drilled on a town lot a mile and a half north of the Faurot well, and this turned out to be a fair oil producer.

But there was no market for the stuff, and there was a widespread belief that there never would be. Pennsylvania's crude had a praffine base and was not an offense to the nostrils. Lima's oil was said—by experts—to resemble greatly the broth of hell. Anyway, it was full of sulphur, if not brimstone, and the usual methods of refining that were successful with Pennsylvania crude left the Lima oil so heavily charged with sulphur that it would not be used in a lamp.

However, firm in the belief that some way would be found to deal with the crude, desultory drilling was carried on by several individuals and groups of Limaites, but none of these men had any first knowledge of the business they were trying to break into and few of them, comparatively speaking, became oil men in the accepted sense of those words.

The first organization to undertake real drilling operations on a large scale was the Trenton Rock Oil Co. On the day the Faurot well was drilled in, one of the citizens attracted the discovery was Col. George P. Waldorf, now of Toledo, but at that time Lima's postmaster. He walked beyond the well—which was on the eastern boundary of the city—out along the little river, sizing up the lay of the land. As he strolled along he met James B. Townsend, the county's prosecuting attorney. The same thought was in the minds of both; the securing of leases in that region.

Bradford Men Appear

The two struck hands on the project, and took in as their associates Mr. Faurot and Judge Charles M. Hughes, their first lease being a large farm to the west of the town. Some 2,000 acres were under lease when I. E. Dean, a scout for the McCalmont Oil Co., of Bradford, Pa., appeared on the scene and made overtures for the formation of a new company in which his principals should play the leading part.

The McCalmont Oil Co. had at that time 1,000 wells and a refinery in the Bradford Field. They were game for the Ohio venture, so the Trenton Rock Oil Co. was incorporated in the fall of 1885 with David Kirk of Bradford as the president, Judge Hughes, vice president, George P. Waldorf, secretary and treasurer and Isaac E. Dean, general manager.

To the 10,000 acres then under lease to the Lima members of the syndicate, there were rapidly added many other thousands until the Trenton had almost a continuous strip of land from Lima to Findlay—on the cherished northeast and southwest line so firmly believed in by the original operators in the Ohio Field.

The McCalmont crowd put $150,000 into the project, but were worried over the reiterated statement of the Standard Oil Co. that Lima crude could not be profitably refined. As a result the Trenton Rock Oil Co. was finally sold to the Standard for $50,000, with an additional $10,000 thrown in to compensate, in part, the Lima men who had put in their time on the leasing.

No Market for Oil

On the face of it things did not look very bright for the Lima district. A number of good wells had been found; Pennsylvania operators had flocked to the scene and the drill was jumping all over that and adjoining counties. But—there

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was no market for the product except as fuel oil.

The first price, 40 cents a barrel, was simply an arbitrary figure placed on the crude by a Chicago man by the name of Edwards, who was able to take a limited amount of the commodity for use with a stove he manufactured.

To meet the great demand for storage, the Standard organized the Buckeye Pipe Line, and, for the first time in history, the Standard itself became a prospector and producer through its subsidiary, the Ohio Oil Co.

As the oil stocks grew apace and no demand was in sight, the price of Lima crude sagged downward until it reached 15 cents, at which figure the Standard—that is to say, the Buckeye Pipe Line—acquired many thousands of barrels, which was cared for in its great tank farms to the south of Lima and south of Cygnet. During this region of low price, the producers of Trenton Rock oil made more money than when prices were many times higher, as it was the days of flush production, when gushers aplenty were opened up. Learning that Canadian crude, which somewhat resembled the Lima product, was being successfully treated at a Petrolia, Ontario refinery, Messrs. Waldorf and Townsend took a barrel of Lima oil to the Petrolia plant, but the results were not satisfactory.

Extracting the Sulphur

However, a chemist there learned that the Lima oil had been brought to the refinery, and he asked for and received a gallon of it. His own reports were favorable, and he followed up his laboratory work with a proposal to the McCalmont company to erect a refinery at Lima.

This gentleman was Dr. Herman Frasch, whose method was destined to give Lima oil its rightful place in the world by the complete extraction of the obnoxious sulphur it contained.

The matter was laid before the McCalmont company in detail, but the Pennsylvanians had acquired a slight chilliness in their pedal extremedies, so they elected to take the loss they had already incurred, rather than run further risks backing Mr. Frasch.

The Standard was then approached by the inventor, and the great Solor Refinery at Lima has proved the success of the Frasch system.

By this time the two Lima districts were defined, and were swinging rapidly toward the peak of their production which was reached in 1896. At that time the Lima and Indiana fields had a combined daily output of 69,000 bbls., and the tankage of the field exceeded 23,000,000 bbls.

Whiting-Lima Pipe Line

Among the activities of the Standard Oil Co., in this field was the building of the Whiting-Lima pipe line, which carried the development of the field a couple of hundred miles farther to the west.

This pipe line, constructed at a cost in excess of $1,000,000 carried Lima and Indiana crude to a great industry at Whiting, Ind., and later the same pipe line was destined to hold oil flowing in the other direction, carrying Kansas and Oklahoma production to the Atlantic seaboard.

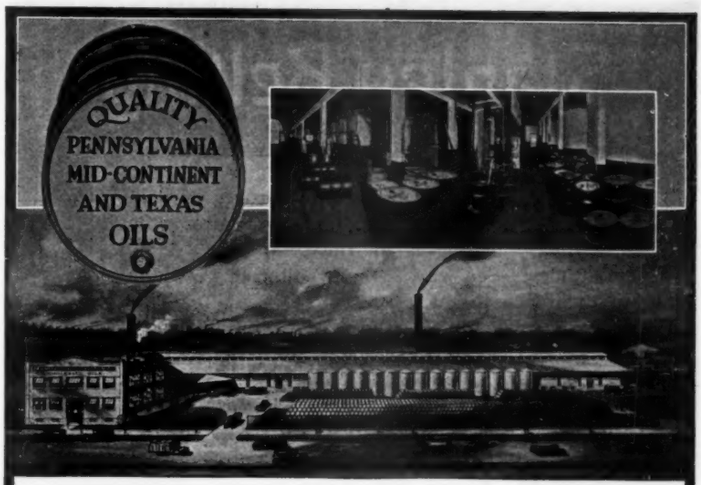
Space will not permit extended notice of the Findlay and Lima development, with its history of wasted gas, low prices and land booms.

A roll call of the men operating in the Lima oil field from 1885 onward would contain the names of about all the Pennsylvania and West Virginia oil men who were able to buy transportation.

Tabulated figures showing wells completed in the Lima Field were compiled by the writer who has spent his years in that work.

Development of Trenton

The most accurate figures compiled on the development work of the Trenton Rock Field of northwestern Ohio, since its advent into the oil column, are interesting not alone to the old timers but the younger generation as well. They show the wonderful stride of the drill in the big years of the wonder field. These figures, as given, show the number of wells completed, number of oil wells, as well as dry holes and gas wells, the two being combined as during the real early



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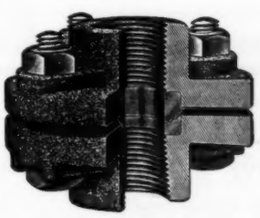

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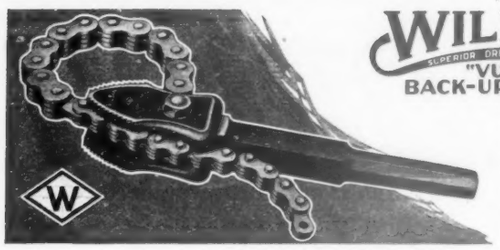

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days the gas wells were termed dry holes, hence the inability to separate them. Also the abandoned wells are listed year by year:

Year	Comp.	Oil Wells	Dry and Gas	Aband. Wells
Prior to 1888	1,784	1,053	731	Prior to 1905
1888	542	514	28	.....
1889	702	648	54	.....
1890	2,151	2,010	141	.....
1891	1,572	1,326	246	.....
1892	1,465	1,277	188	.....
1893	1,877	1,557	320	.....
1894	3,001	2,561	440	.....
1895	5,559	4,729	830	.....
1896	4,339	3,713	626	.....
1897	2,755	2,265	490	.....
1898	2,862	2,485	367	.....
1899	4,469	4,056	413	.....
1900	5,129	4,535	594	.....
1901	3,672	3,220	452	.....
1902	4,439	3,971	468	.....
1903	4,072	3,773	299	.....
1904	3,131	2,908	223	7,621
1905	1,578	1,427	151	751
1906	1,535	1,373	162	1,059
1907	890	761	129	1,357
1908	848	768	80	1,135
1909	872	787	85	1,127
1910	572	515	57	1,500
1911	527	495	32	1,142
1912	551	481	70	856
1913	972	882	90	601
1914	861	776	85	493
1915	260	224	36	663
1916	699	620	79	657
1917	535	475	60	1,259
1918	466	419	47	776
1919	385	328	57	No record
1920	565	478	87	No record
1921	461	372	89	501
1922	522	449	73	373
1923	697	605	92	576
Total	67,307	58,836	8,471	22,447

Central Ohio Field

The Central Ohio Field as far as a back record has been compiled shows a total of 16,118 wells drilled, of which 9,961 were gas wells, 3,962 were dry and 2,195 were oil wells. The figures of wells for each year up to the close of 1923, are as follows:

Year	Comp.	Gas Wells	Dry	Oil Wells
Prior to 1897	848	641	207	0
1897	139	88	51	0
1898	132	120	12	0
1899	151	134	17	0
1900	116	97	19	0
1901	148	113	35	0
1902	306	266	40	0
1903	353	290	62	0
1904	382	334	49	0
1905	400	342	58	0
1906	388	337	51	0
1907	521	431	90	0
1908	522	398	124	0
1909	694	548	146	0
1910	668	466	202	0
1911	641	450	191	0
1912	926	637	289	0
1913	643	408	235	0
1914	943	686	211	46
1915	952	714	189	49
1916	469	322	111	36
1917	587	407	143	37
1918	605	383	159	63
1919	940	269	221	450
1920	1,243	263	383	597
1921	853	346	260	247
1922	906	387	214	305
1923	642	84	193	365
Total	16,118	9,961	3,962	2,195

These wells were mostly drilled for gas until 1914 when oil commenced to show in the gas sands and the opening of the Chatham Field of Medina County brought about a heavy oil development in the shallow sands, which proved rich in 1919.

Outside of the number of wells listed there had been up to 1913—a total of 2,274 shallow wells drilled in parts of Central Ohio, also in Northwestern Ohio for gas. Of this number 1,778 were gas wells and 496 were dry. Up to and including 1913 a total of 2,665 gas wells were abandoned, which included both shallow and deep sand wells, leaving at the close of 1913, a total of 5,673 gas wells producing. Since that date no record has been maintained of the wells that were abandoned.

LOUISIANA OFFICIALS WARN CARBON MAKERS

SHREVEPORT, La., Aug. 2.—It is evident the Louisiana Conservation Department means business in its efforts to conserve the gas supply of the State, as testified by the special meeting called at Monroe, by the commission, at which were present some 60 representatives of the gas and carbon interests, Commissioner F. T. Payne, of New Orleans; Supervisor H. W. Bell, of Shreveport; and R. D. Webb of Monroe, local manager of the conservation department. Various phases of the new conservation laws were discussed and carbon manufacturers were warned that failure to observe the regulations would result in closing down of the wells.

Supervisor Bell, of the Minerals Divi-

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sion, later made a trip through the field to investigate the situation and as a result orders were issued to shut down the plant of the Louisiana Carbon Co. It was asserted that four of the five wells operated by this company were being overdrawn and the wells were sealed by order of Commissioner Payne.

A request has been made by Carl McHenry, attorney for the Louisiana Carbon Co., that permission be granted to reopen the wells and resume operation of the plant provided a competent meter man be put on the job to prevent overpulling of the wells. It is probable such permission will be granted but an adequate force is being put on by the Conservation Department to prevent further violations.

At the meeting, a resolution was passed pledging those present to report any violations of which they may become aware in the field, and with few exceptions, the carbon makers have signified their willingness to abide by the new laws and regulations.

NEW SUIT TO CANCEL NAVAJO OIL LEASE

WASHINGTON, D. C., Aug. 2.—Attorney General Stone has issued orders for the filing of a suit to cancel an oil and gas prospecting lease applying to a reservation created by executive order for the Navajo Indian Nation in Southern Utah. If the Government is successful in this suit, it will take similar action to invalidate more than 20 other such permits, 18 of which were granted by former Secretary Fall of the Interior Department and which apply to Indian lands in a dozen different western localities.

The suit ordered filed is against E. M. Harrison, the Midwest Oil Co. and the Southwest Oil Co. and is based on an opinion recently submitted by the Attorney General to the president, in which he held that Mr. Fall's construction of the general leasing act of 1920 was in error when it applied the oil leasing provisions to reservations created by executive order. Mr. Fall's interpretation of the provision was given upon application for a lease by Mr. Harrison, said here to be an official of the Midwest Company, and under that construction of the law the other permits also were granted.

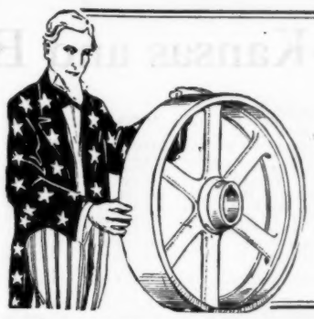
Since the present Attorney General placed a different construction on the law, the Interior Department has rejected all pending applications for permits on such land, numbering some 400.

Mr. Stone and Secretary Work of the Interior Department are in accord that no further leasing of the lands involved should be permitted until Congress authorizes extraction of the oil or gas. They feel that Congress should express its views as a guiding policy for the Executive Department to follow.

Classified Wants
Pages 126-127

LOWEST TANKER RATES

HOUSTON, Tex., August 2.—Tanker charter rates on crude from Gulf ports in North Alantic seaboard refinery points are 24 cents per barrel, the lowest since the end of the World War.



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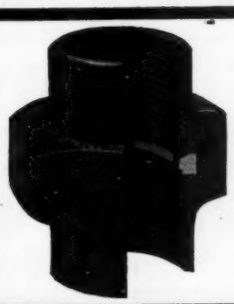

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Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS PIPE LINE REPORT FOR MAY

Runs

	Month	Dy. Av.
*Prairie Pipe Line Co.	3,596,000	116,000
Gulf Pipe Line Co.	1,035,249	33,395
Texas P. L. Co.	469,448	15,143
Magnolia Petroleum Co.	1,152,274	37,170
Empire Pipe Line Co.	868,876	28,093
Cosden Pipe Line Co.	815,635	26,311
*Sinclair Pipe Line Co.	1,240,000	40,000
*Other lines	7,378,000	238,000
Total May	16,495,482	532,112
Total April	15,559,656	518,655
Difference	935,826	13,457

Shipments

	Month	Dy. Av.
*Prairie Pipe Line Co.	3,658,266	118,009
Gulf Pipe Line Co.	1,106,034	35,679
Texas Pipe Line Co.	466,978	15,063
Magnolia Petroleum Co.	1,138,580	36,728
Empire Pipe Line Co.	706,345	22,785
Cosden Pipe Line Co.	813,356	26,237
†Sinclair Pipe Line Co.	1,919,354	61,912
Other lines	7,285,000	235,000
Total May	17,093,913	551,413
Total April	16,435,126	547,841
Difference	658,787	3,572

Stocks

*Prairie Oil & Gas Co.	22,500,000
*Prairie Pipe Line Co.	2,000,000
Gulf Pipe Line Co. and Gypsy Oil Co.	9,361,019
The Texas Co.	6,937,335
Magnolia Petroleum Co.	8,349,769
Empire Pipe Line Co.	2,097,235
Cosden Pipe Line Co.	2,952,548
*Sinclair Crude Oil Purchasing Co.	28,850,000
Carter Oil Co.	17,877,416
*Other lines	8,600,000
Total May	110,526,322
Total April	110,013,306
Difference	513,016

*Estimated. †Includes shipments of Texas crude.

Note—Stocks do not include approximately 3,100,000 bbls. of crude oil held in storage on private tank farms and leases.

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for May and June:

	May, '24.	June, '24.
Nat. Transit	199,626.14	185,964.53
S. W. Pa. P. L.	85,544.16	84,784.19
Eureka P. L.	372,494.35	360,470.64
Buckeye P. L. (Macksburg)	258,024.34	245,849.66
Buckeye P. L. (Cleveland)	15,210.59	15,114.06
Buckeye P. L. (Lima, etc.)	145,504.50	149,517.93
Indiana P. L.	12,812.12	13,211.64
Cumberland P. L.	372,609.80	352,152.78
N. Y. Transit	19,947.74	19,920.01
Tidewater P. L.	152,075.52	146,705.68
Pure Oil P. L.	188,558.69	180,842.04
Emery P. L.	35,511.41	35,188.79
Indian Refining	66,447.27	60,342.51
Paragon Dev.	41,802.11	34,461.48
Pittsburgh P. L.	8,903.97	7,792.56
Swiss P. L.	.....	.....
Riggs Refining	5,124.29	4,532.41
Total	1,980,197.00	1,896,900.90
Daily average	63,941.84	63,230.03

—Note: Indian Refining Co. also reported other receipts of 309,849.78 bbls. Paragon Refining Co. had other receipts of 142,866.43 bbls. Paragon Development Co. had other receipts of 4,510.65 bbls. Pittsburgh Pipe Line had other receipts of 510.53 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for May and June:

	May, '24.	June, '24.
National Transit	373,131.02	349,447.12
S. W. Pa. P. L.	253,585.74	236,010.50
Eureka P. L.	112,059.21	123,095.03
Buckeye P. L. (Macksburg)	100,473.73	325,987.67
Buckeye P. L. (Cleveland)	1,214.64	1,451.07
Buckeye P. L. (Lima, etc.)	680,684.61	601,546.36
Indiana P. L.	931,269.90	830,895.76
Cumberland P. L.	151,162.89	133,254.79
Southern P. L.	.....	7,736.85
Crescent P. L.	.....	.....
N. Y. Transit	507,491.63	668,690.48
Northern P. L.	80,309.14	120,463.56
Tidewater P. L.	130,310.85	121,407.61
Pure Oil P. L.	204,887.66	167,238.07
Emery P. L.	38,385.97	43,723.94
Paragon Ref.	181,821.26	154,584.15
Indian Ref.	381,740.52	348,715.10
Paragon Dev.	44,760.63	45,650.74
Pittsburgh P. L.	11,634.19	10,292.56
Total	4,184,923.59	4,290,290.36
Daily average	134,997.50	143,009.68

Note: Indian Refining Co. also reported other deliveries of 91.80 bbls.

Gross Stocks

The gross stocks held by various pipe lines in the oil producing section of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of May and June were as follows:

	May, '24.	June, '24.
National Transit.	969,330.61	927,391.38
S. W. Pa. P. L.	740,981.21	756,214.63
Eureka P. L.	1,910,892.33	1,857,807.14
Buckeye P. L. (Macksburg)	576,679.85	454,683.96
Buckeye P. L. (Cleveland)	16,959.02	33,775.25
Buckeye P. L. (Lima, etc.)	3,184,697.93	3,506,557.58
Indiana P. L.	628,594.63	617,911.92
Cumberland P. L.	568,123.90	583,831.12
Southern P. L.	512,524.99	596,507.15
Crescent P. L.	80,724.80	77,167.35
N. Y. Transit	704,366.99	725,304.69
Northern P. L.	763,364.39	719,712.09
Tidewater P. L.	.....	.....
Pure Oil P. L.	359,255.82	373,121.94
Emery P. L.	21,790.55	13,932.36
Paragon Ref.	175,717.01	166,689.08
Indian Ref.	101,113.46	118,244.29
Paragon Dev.	11,370.55	8,834.23
Pittsburgh P. L.	7,521.89	5,683.28
Swiss P. L.	.....	.....
Riggs Ref.	1,299.14	834.95
Total	11,235,309.07	11,544,204.42
Increase	412,566.99	208,895.35

Grades of Oil

The following table shows the amount of the different grades of oil held by the Eastern pipe lines at the close of May and June, showing the gross stocks of the above fields:

	May, '24.	June, '24.
Pennsylvania	3,923,093.00	3,668,678.80
Lima	1,113,472.67	1,150,446.32
Kentucky	1,441,241.81	1,518,177.30
Mid-Continent	4,779,382.96	5,135,399.33
Illinois	78,118.62	71,502.67
Total	11,335,309.07	11,544,204.42

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1921	1922	1923	1924
January	64,460	67,702	75,790	62,638
February	70,054	75,096	71,093	68,023
March	68,555	76,531	76,592	68,721
April	65,036	75,462	75,614	71,058
May	65,466	77,592	77,365	63,942
June	62,438	76,193	77,593	63,230
July	69,486	76,435	71,879	.....
August	64,888	79,387	76,910	.....
September	60,110	78,512	72,358	.....
October	57,688	77,209	76,256	.....
November	58,470	75,313	70,763	.....
December	61,000	73,351	69,271	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania Lima and other fields for past four years:

	1921	1922	1923	1924
January	115,550	119,792	171,067	145,518
February	96,736	111,362	164,219	148,732
March	84,168	127,753	185,487	147,098
April	101,015	127,068	179,751	147,611
May	100,253	127,840	177,102	134,997
June	105,037	137,638	173,598	143,010
July	97,096	137,872	168,330	.....
August	101,652	153,275	142,766	.....
September	117,440	158,761	137,266	.....
October	105,728	165,346	134,597	.....
November	121,803	165,677	131,426	.....
December	104,023	172,861	139,909	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields including oil received from other lines at the close of each month for the past three years:

	1922	1923	1924
January	16,297,858	14,040,567	12,907,201
February	17,009,293	14,028,437	11,944,001
March	16,877,937	13,873,146	10,906,752
April	16,777,842	13,737,575	10,922,742
May	16,948,962	13,815,622	11,335,309
June	16,810,169	14,541,253	11,544,204
July	16,669,286	14,645,584	.....
August	16,235,220	14,770,539	.....
September	16,228,545	14,803,444	.....
October	15,757,746	14,504,111	.....
November	15,171,972	14,157,726	.....
December	14,323,765	13,444,361	.....

Franklin Pipe Line Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

1923—	Receipts.	Shipments.	Stocks.
June	2,927.71	4,743.78	21,926.16
July	2,996.64	1,471.57	23,448.23
August	3,199.07	3,769.34	22,874.96
September	2,829.79	5,822.38	19,882.27
October	2,694.23	5,251.81	17,324.79
November	2,980.66	4,150.98	16,154.47
December	2,893.07	3,499.27	15,548.27
1924—			
January	2,942.19	8,641.71	9,848.75
February	2,151.78	1,926.55	10,073.98
March	3,398.78	1,716.28	11,756.48
April	3,311.84	2,066.78	13,001.54
May	3,036.50	5,338.31	10,699.73
June	3,188.31	407.01	13,481.13

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, July 1	2,215,955.43
Runs from wells	695,702.34
Other receipts	120,365.71
Regular deliveries	474,423.05
Other deliveries	336,596.04

The amount of Illinois oil run by the Tide Water Pipe Line Co. in June was 29,358.53 bbls., and deliveries were 53,970.33 bbls. Adding these figures to those of the Illinois Pipe Line Co., makes the runs and deliveries from the Illinois field as follows:

1923—	Runs.	Deliveries.
June	532,511.82	509,137.77
July	594,553.42	489,269.17
August	594,747.94	367,152.82
September	542,561.59	305,925.01
October	576,867.09	347,813.23
November	546,859.43	285,692.09
December	534,185.04	282,542.41
1924—		
January	493,337.25	280,792.09
February	535,490.70	353,813.14
March	611,283.36	360,543.83
April	514,356.43	333,546.10
May	751,080.44	510,414.42
June	726,060.87	528,402.33

The Tide Water Pipe Co. Ltd., also delivered in June, 219,002.93 bbls. of Oklahoma oil. The total deliveries of all grades by the Tide Water were 394,380.87 bbls.

AVERAGE WEEKLY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF PORTS

Av. bbls. per wk.—	ATLANTIC PORTS						GULF COAST PORTS					Total All-Ports
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Pt. Arthur Sabine Pass	Tampa	Total	
January	138,800	15,400	665,400	160,400	100,600	1,080,600	.....	172,000	.....	.....	172,000	1,252,600
February	90,250	36,250	832,000	208,250	36,250	1,202,000	.....	196,250	.....	.....	196,250	1,398,250
March	42,455	17,388	623,455	209,321	77,455	970,067	.....	.....	.....	.....	.....	970,067
April	39,669	17,969	614,369	88,200	53,269	813,476	.....	.....	.....	.....	.....	813,476

AVERAGE WEEKLY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Av. bbls. per wk.—	ATLANTIC PORTS						GULF COAST PORTS					Total All-Ports
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Pt. Arthur Sabine Pass	Tampa	Total	
November	67,200	108,869	270,669	122,500	195,060	764,200	345,490	359,331	147,469	32,367	885,731	1,649,931
December	105,000	133,679	240,254	144,739	300,545	924,217	420,224	492,700	186,949	51,268	1,151,140	2,075,357
January	112,800	118,200	552,000	97,800	215,800	603,200	358,800	248,000	137,800	20,800	773,200	1,538,000
February	134,750	175,750	195,250	102,750	299,250	907,750	372,500	296,000	190,250	36,500	895,250	1,803,000
March	148,358	141,806	283,458	124,542	292,642	990,806	463,806	365,358	223,552	55,548	1,108,261	2,099,107
April	152,369	154,931	319,900	94,962	248,969	971,131	252,900	348,131	119,009	15,869	865,900	1,837,031

GROSS PRODUCTION AND DAILY AVERAGE IN THE UNITED STATES FOR 12 MONTHS

1923—		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Wyoming-Montana	Other Fields	Total
July:	Month	25,262,082	15,260,184	11,258,042	2,448,566	3,713,738	1,882,481	4,245,547	3,334,110	67,404,750
	Daily average	814,906	492,264	382,518	78,986	119,798	60,725	136,953	107,552	2,174,347
August:	Month	26,440,005	14,049,076	12,157,429	2,316,320	3,292,580	1,952,349	4,290,406	3,479,077	67,977,242
	Daily average	852,903	453,196	392,172	74,720	106,212	62,979	138,400	115,969	2,192,314
September:	Month	25,762,487	12,812,220	12,879,682	2,234,730	3,164,900	1,787,430	4,561,550	3,269,551	66,472,550
	Daily average	858,750	427,074	429,323	74,491	105,497	59,581	152,052	105,468	2,215,752
October:	Month	24,576,400	12,961,782	15 933,383	2,336,346	3,120,274	1,837,990	3,540,880	3,475,913	67,782,968
	Daily average	792,787	418,122	513,980	75,366	100,654	59,290	114,222	112,126	2,122,031
November:	Month	22,397,848	12,334,620	15,556,507	2,268,840	2,973,000	1,816,860	4,792,466	3,138,464	65,278,605
	Daily average	746,595	411,154	518,550	75,628	99,100	60,562	159,782	104,615	2,176,553
December:	Month	21,899,247	12,232,259	10,065,856	2,345,150	4,017,850	1,919,574	3,304,326	3,147,812	58,932,074
	Daily average	706,427	394,589	324,705	75,650	129,608	61,922	106,591	101,542	1,901,034
1924—										
January:	Month	20,912,500	12,292,833	10,326,643	2,233,878	3,686,680	1,601,175	4,636,230	2,950,500	58,640,439
	Daily average	674,597	396,543	333,449	71,738	118,925	51,651	149,556	95,177	1,891,627
February:	Month	19,341,226	12,236,637	10,495,486	2,112,853	3,302,750	1,497,460	4,168,450	2,997,700	56,152,562
	Daily average	666,939	421,953	361,913	72,857	113,888	51,629	143,740	103,369	1,936,295
March:	Month	19,913,262	13,336,851	12,077,617	2,206,425	3,882,695	1,701,593	3,993,890	3,258,000	60,370,333
	Daily average	642,363	430,221	389,601	71,175	125,248	54,890	128,835	105,097	1,947,430
April:	Month	19,299,849	13,452,240	11,725,830	2,265,090	4,068,225	1,495,582	3,901,755	3,231,000	59,439,577
	Daily average	643,328	448,408	390,861	75,503	135,608	49,853	130,058	107,700	1,981,319
May:	Month	19,833,576	14,248,057	11,923,316	2,486,696	4,659,117	1,596,701	4,033,564	3,355,000	62,136,027
	Daily average	639,793	459,615	384,623	80,216	150,291	51,507	130,109	108,226	2,004,065
June:	Month	18,807,999	14,457,390	11,515,020	2,473,320	4,756,443	1,811,880	3,798,634	3,211,500	60,832,186
	Daily average	626,933	481,913	383,834	82,444	158,548	60,419	126,621	107,050	2,027,739
Total 12 months		264,446,481	159,674,149	145,924,811	27,718,214	44,638,252	20,901,065	49,267,698	38,848,627	751,419,297
Daily average		722,531	436,268	398,702	75,733	121,962	57,107	134,611	106,144	2,053,550

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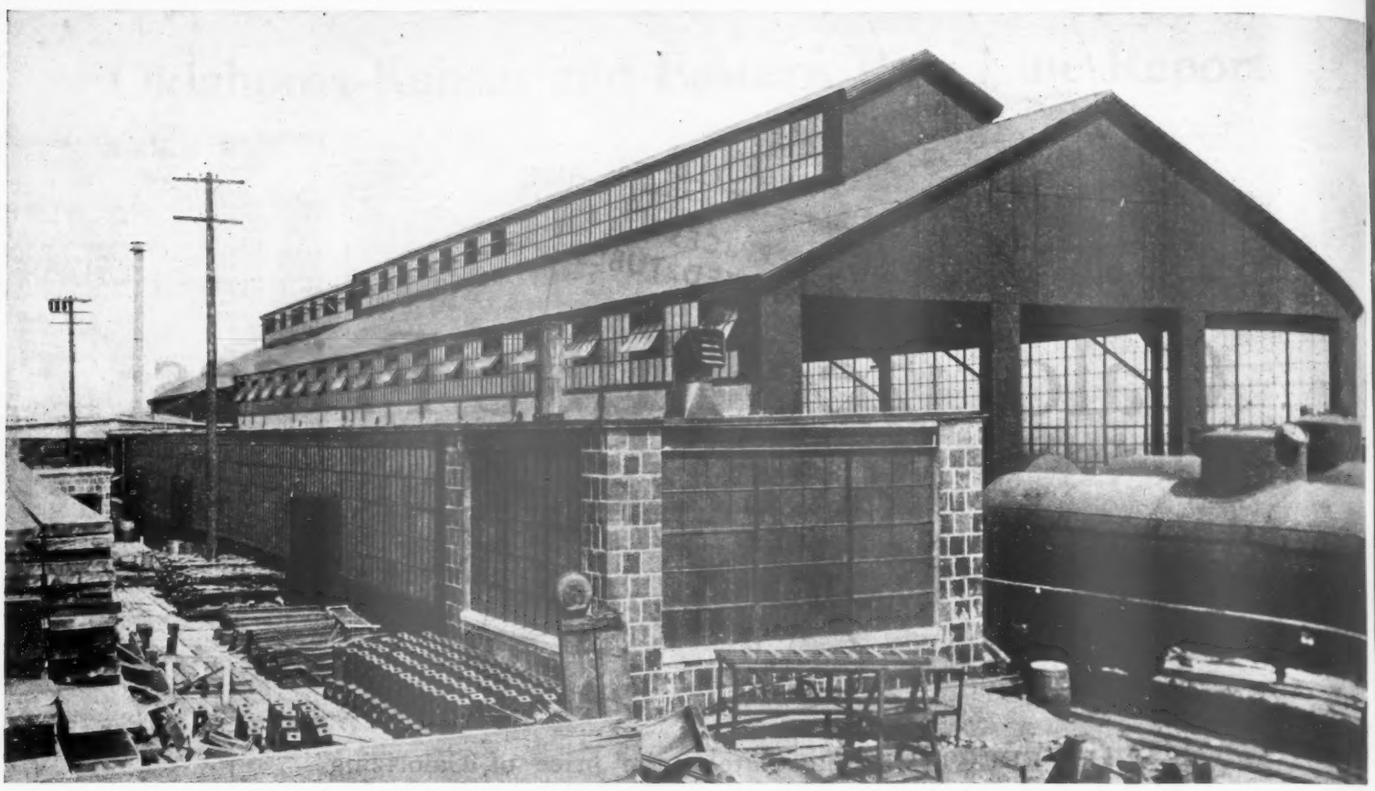
The Oil and Gas Journal, issued weekly by The Petroleum Publishing Company, 114-116 West Second Street, Tulsa, Oklahoma. Subscription price $6.00 a year; 15 cents a copy. Entered as second-class mail matter December 15, 1911, at the postoffice at Tulsa, Okla., under the Act of March 3, 1879.

Total 12 months						
Daily average	722,521	436,268	398,702	75,733	121,962	



Exterior view of tank repair shop, Bayonne, N. J. Built by The Austin Company.

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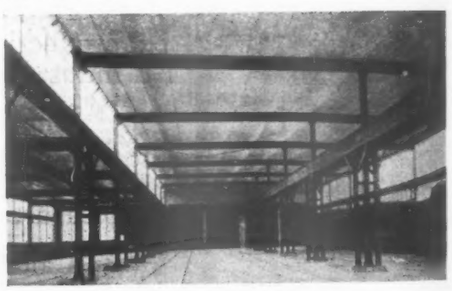

Interior view of locomotive tank repair shop. Built by Austin. This building is of Austin Modified Standard Design. Exterior view of same building below.

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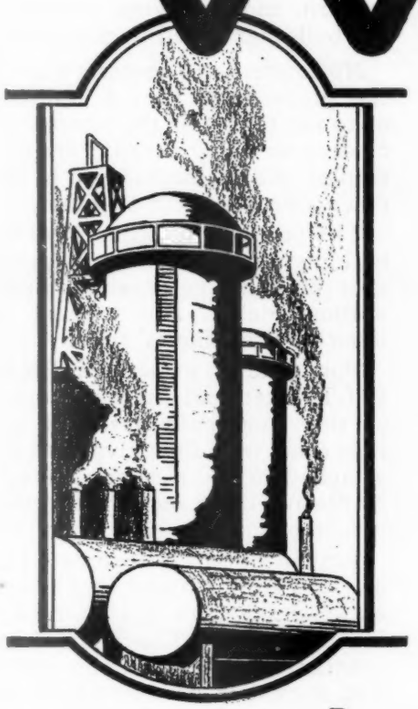
WICO



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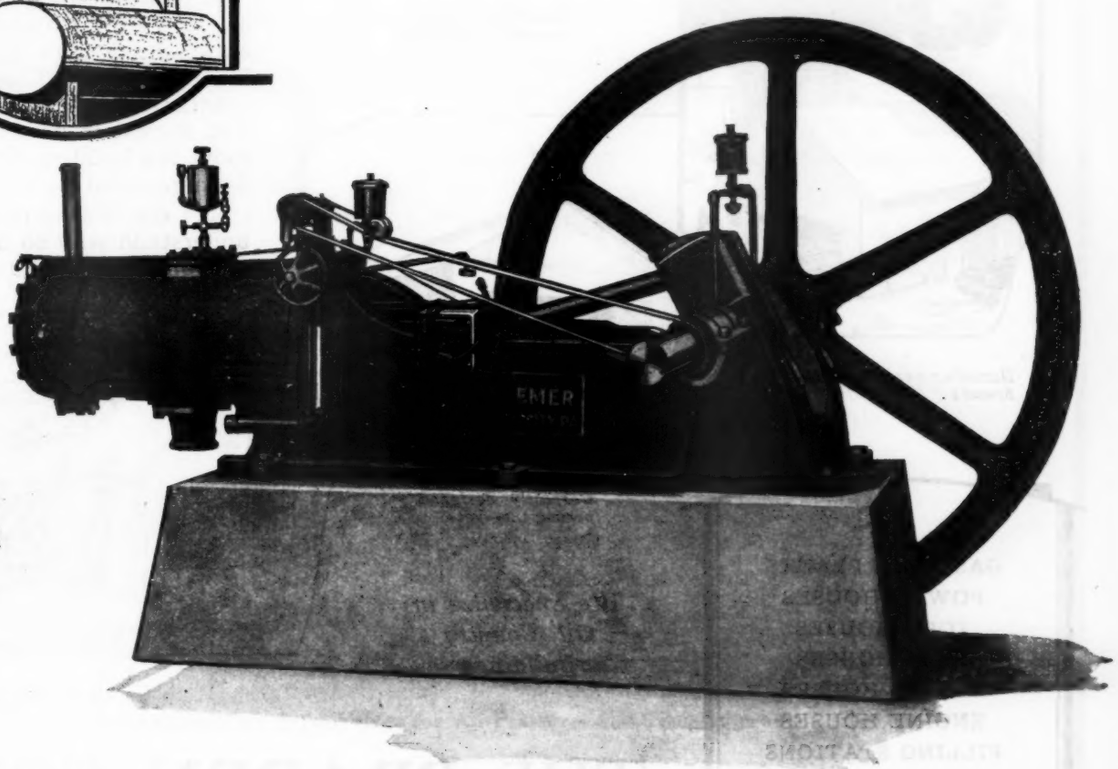

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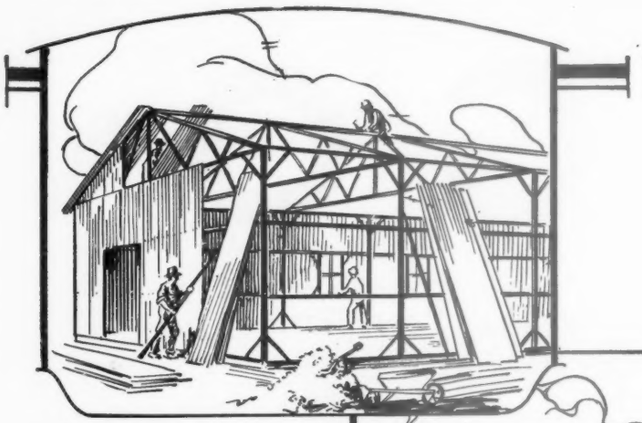

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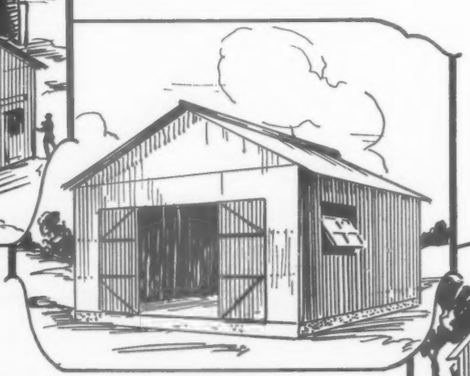

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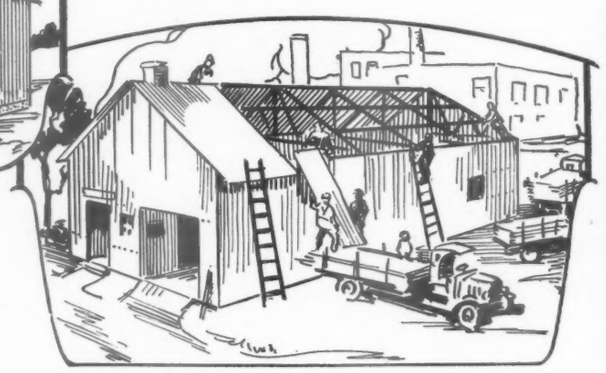

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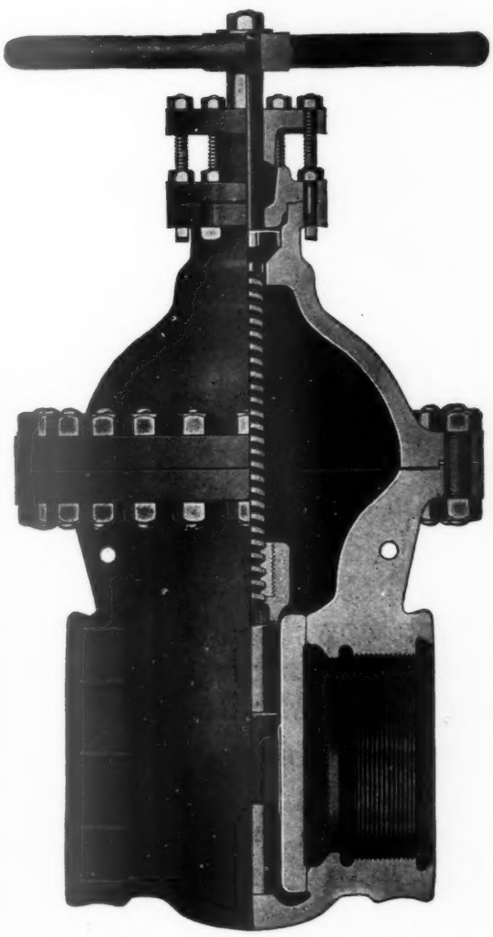

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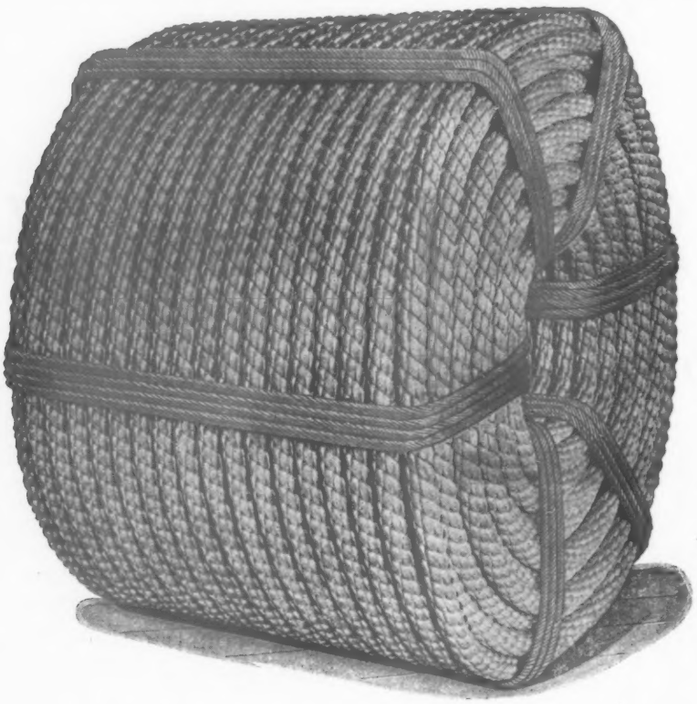

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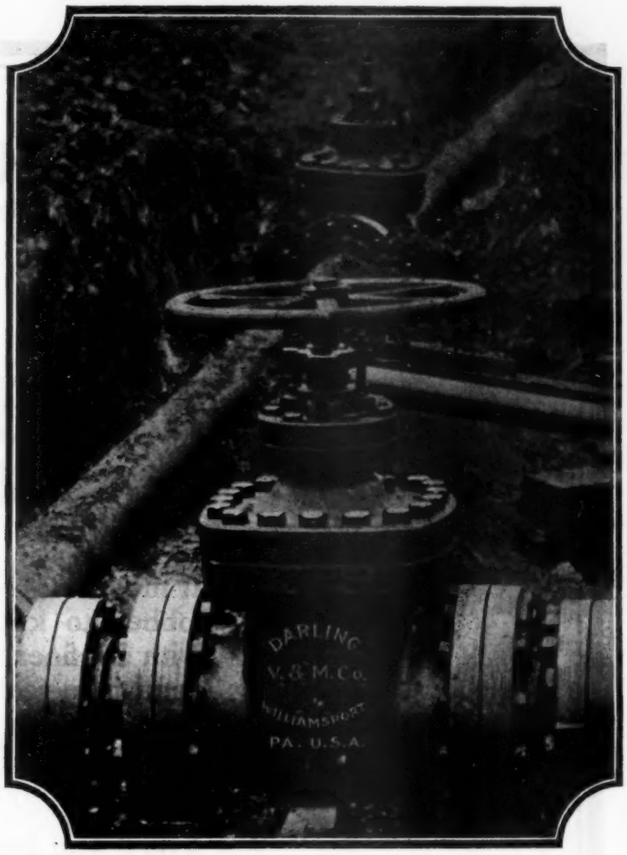

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General Motors Trucks

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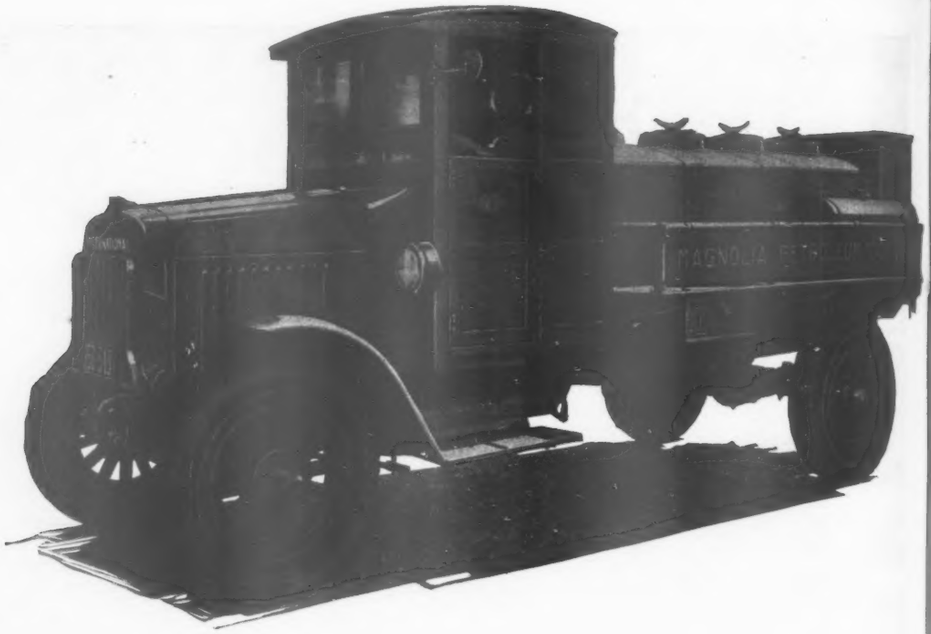

Find Out What Oil Men Say About

International Motor Trucks

International Features:

Life Guarantee on Crankshaft and Main Ball Bearings:

We guarantee that the crankshaft in the heavy-duty International will not break, and the main ball bearings will not break, wear out or burn out during the life of the truck. No other truck carries a guarantee like this.

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A complete departure from present-day truck steering design. Steering post set at 30-degree angle. Permits natural and comfortable driving without sacrifice of loading space.

Removable Cylinders:

International design eliminates reboring cylinders or replacing complete cylinder blocks. International was first to use this type of construction.

Rear Auxiliary Springs, Exclusively International:

These springs, inoperative under light loads, come into action when needed. Assure correct spring flexibility under varying loads.

Free Inspection Service:

Every International owner is assured free inspection service at regular intervals for the life of his trucks. This valuable working service, backed by more than 100 Company branches and their service stations, is unique in the automotive industry.

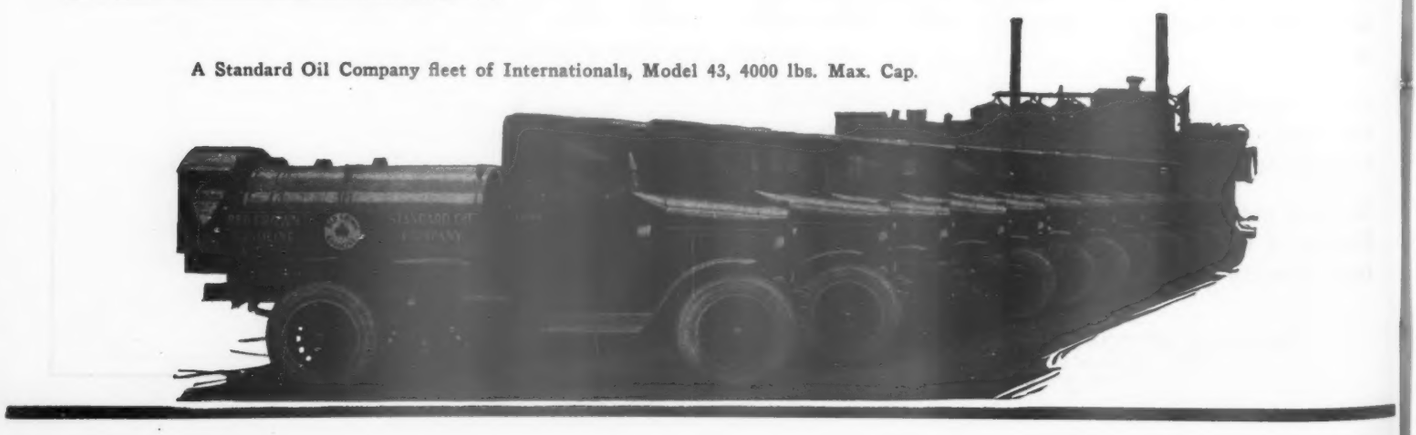
THE oil business—in all its phases— has joined hands with International haulage in hundreds of localities. For years they have worked with complete satisfaction to owners, their drivers, and their customers. The good reputation of International trucks as to sturdiness, speed and flexibility, powerful attractive appearance, lasting after-sale service rendered, etc., is vouched for in the industry. Scores of single trucks and fleets are going to work for new owners, and veteran single trucks are growing into fleets.

International Model 63, illustrated above, is a most efficient unit for heavy hauling. The heavy-duty models are built in 3,000, 4,000, 6,000, and 10,000 pounds, maximum capacities, with bodies to meet every requirement. The International Speed Truck, built for loads up to 2000 pounds, is a popular favorite for fast, light hauling. Upon request, we will gladly supply you with names of International owners in the oil industry and the address of the nearest showroom where the full line of new models is on display.

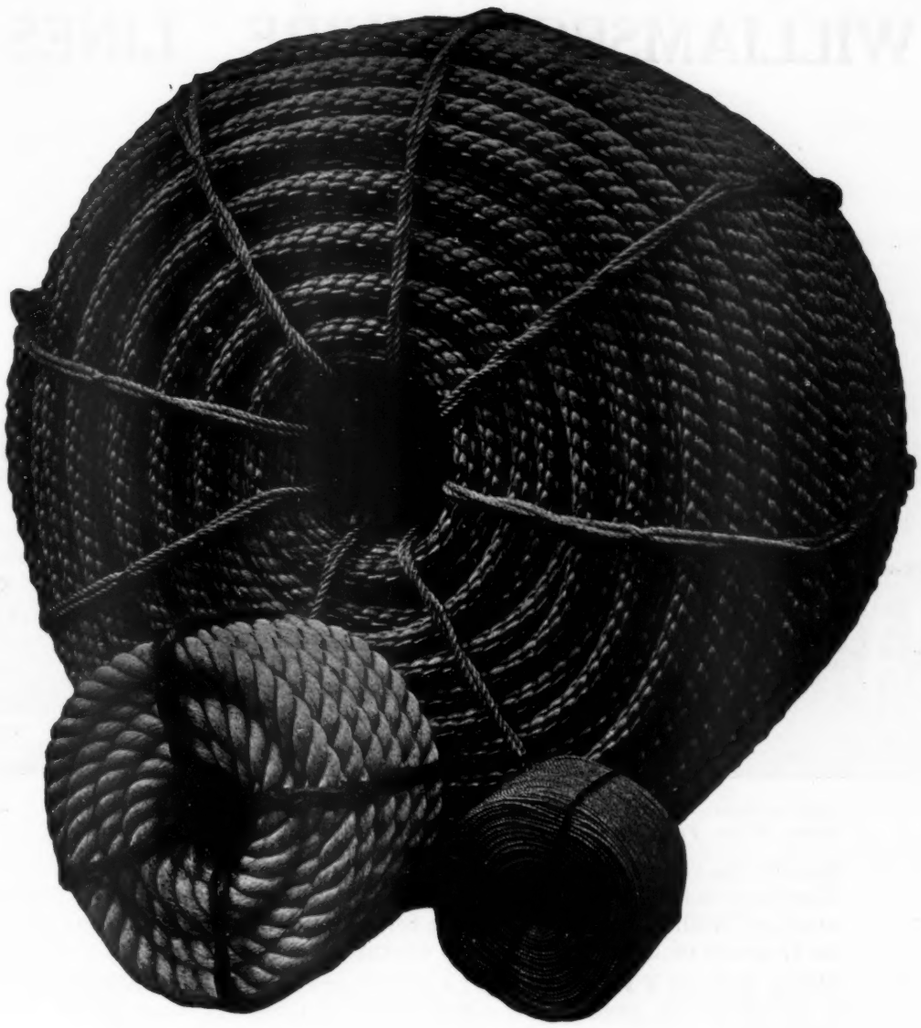
International Harvester Company
of America
(Incorporated)

606 So. Michigan Ave. Chicago, Ill.

A Standard Oil Company fleet of Internationals, Model 43, 4000 lbs. Max. Cap.



New Bedford Cordage



New Bedford Drilling Cable, Bull Rope and Torpedo Line

For Sale by the Continental Supply Company at their Branch Stores

MANUFACTURED BY

NEW BEDFORD CORDAGE CO.

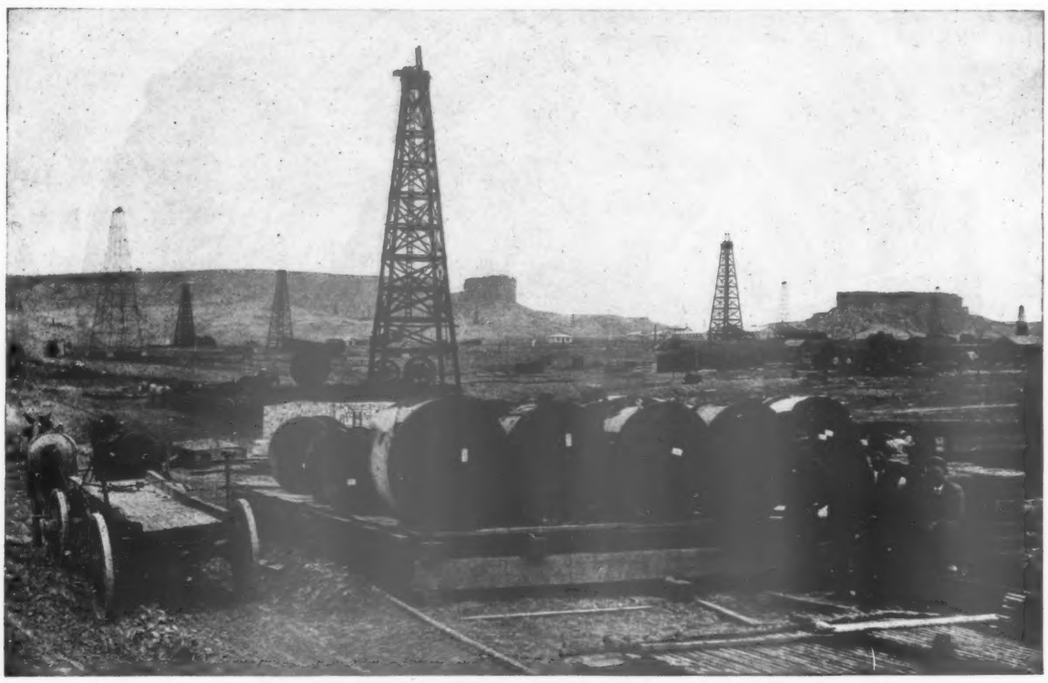
ESTABLISHED 1842

General Offices: 120 BROADWAY, NEW YORK CITY

Mills: NEW BEDFORD, MASS.

Let the Boys In the MUTUAL OIL COMPANY'S HOME CAMP YARDS Salt Creek, Wyoming tell you what they think of

WILLIAMSPORT WIRE LINES



Left to right:—Martin Norman, Tool Pusher; Ralph Hershey, Whse. Foreman; Henry White, Field Foreman; E. E. Klahr, Field Supt.; F. H. Smith, Salesman.

Here's the Green Drilling Company's Camp, near Castle Rock. They not only believe in preparedness as evidenced by the large stock of Williamsport Lines in the foreground, but in protection as to grade of lines they put into operation.

When you put a Williamsport Line into service you KNOW for a certainty the grade. No other make of lines give you this protection.

Send for interesting literature telling why Williamsport is the Line you should use.

WILLIAMSPORT WIRE ROPE COMPANY
Main Office and Works: Williamsport, Pa.
Oil Country Sales Offices:
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SERVICE IN EVERY IMPORTANT FIELD

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REPUBLIC SUPPLY ★ STORES ★

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†Graham, Texas
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†Electra, Texas
†Burkburnett, Texas
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When in need of dependable Oil field equipment, call on The Republic Supply Stores. There's one near your well, with a complete stock of such equipment as

Republic Iron & Steel Co.'s Tubing, Casing, Drive and Line Pipe.

Standard Seamless Tube Co.'s Seamless Upset Rotary Drill Pipe.

American Well & Prospecting Co.'s "Gumbo Buster" Rotary Equipment.

Jones' Acme Sucker Rods.

American Steel & Wire Co.'s and Broderick & Bascom's Wire Rope.

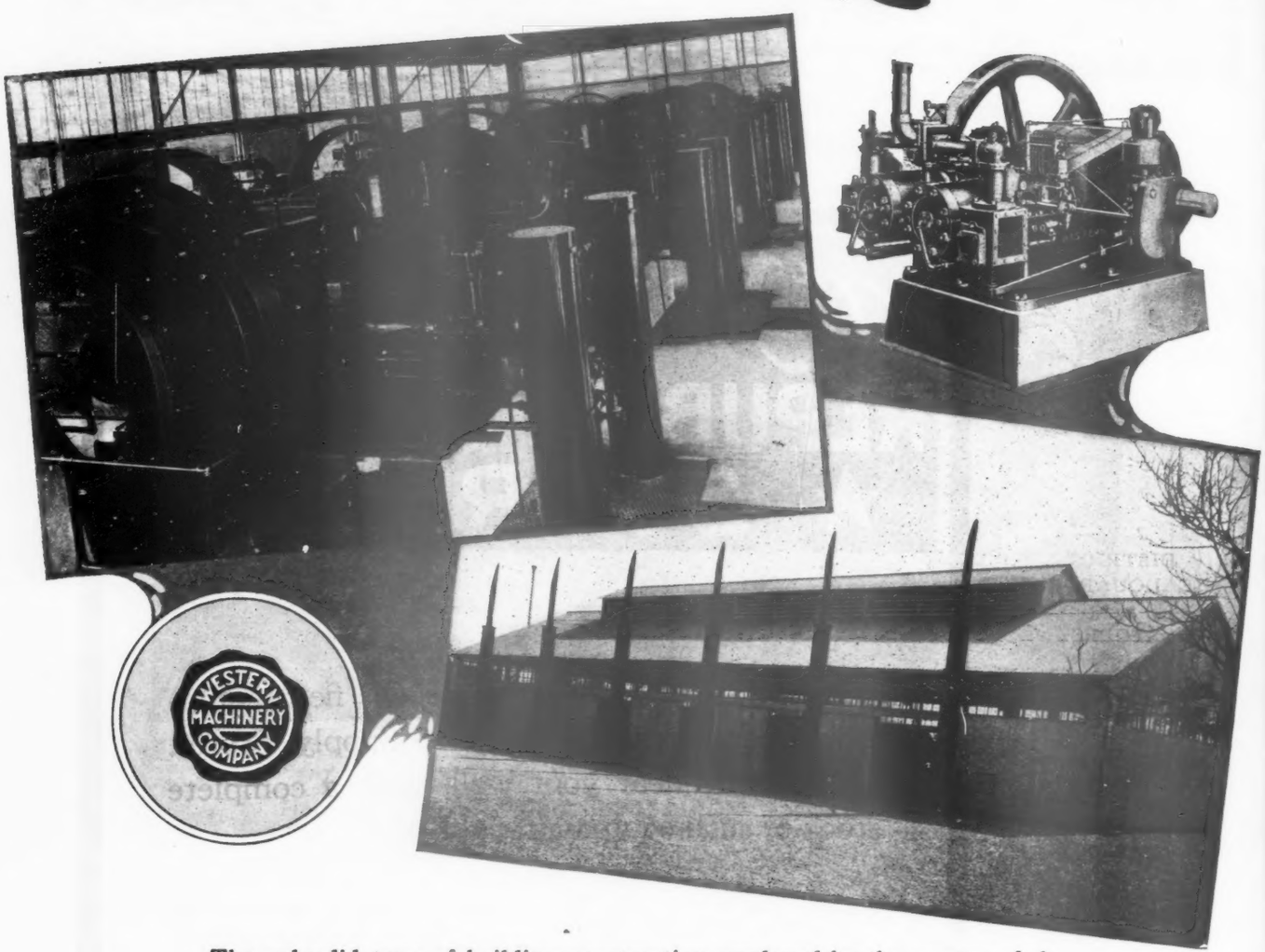
Hughes Tool Co.'s Hughes Rock Bits, Hughes Disc Bits, and Hughes Special Milling Cutters.

Bovaird & Seyfang, and McNamar Oil Field Boilers.

Jones' Acme Gas Engines.

REPUBLIC SUPPLY CO

HIGH TYPE CONSTRUCTION "WESTERN" EQUIPPED



The splendid type of building construction employed by the owners of the above plant bespeaks the high degree of pride they have in their power equipment.

The six 160 horsepower "Western" Duplex Engines are of the four-cycle type; and being of small bore and long stroke, most liberally proportioned, and of rugged construction throughout, make for an over-all efficiency and economy that is unsurpassed and rarely equalled.

We, as manufacturers, are proud of the engines, idlers, and mufflers used in this installation; and of the complete plant, which is outstanding among dozens of gasoline compressor plants throughout the oil fields.

A single "Western" often has changed the complete power policy of an entire company.

WESTERN MACHINERY COMPANY

General Offices and Factory: 904 North Main St.
Los Angeles, California

Branches:

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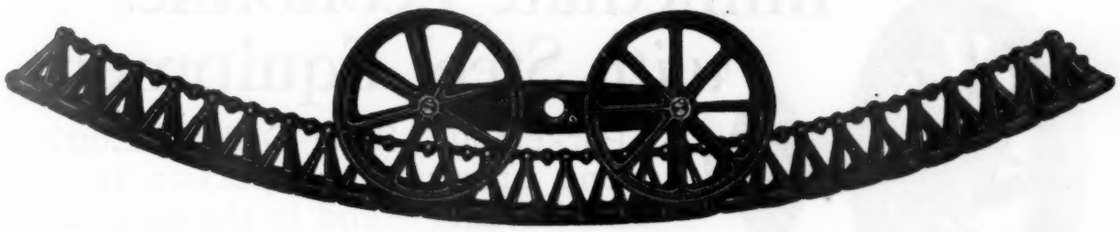
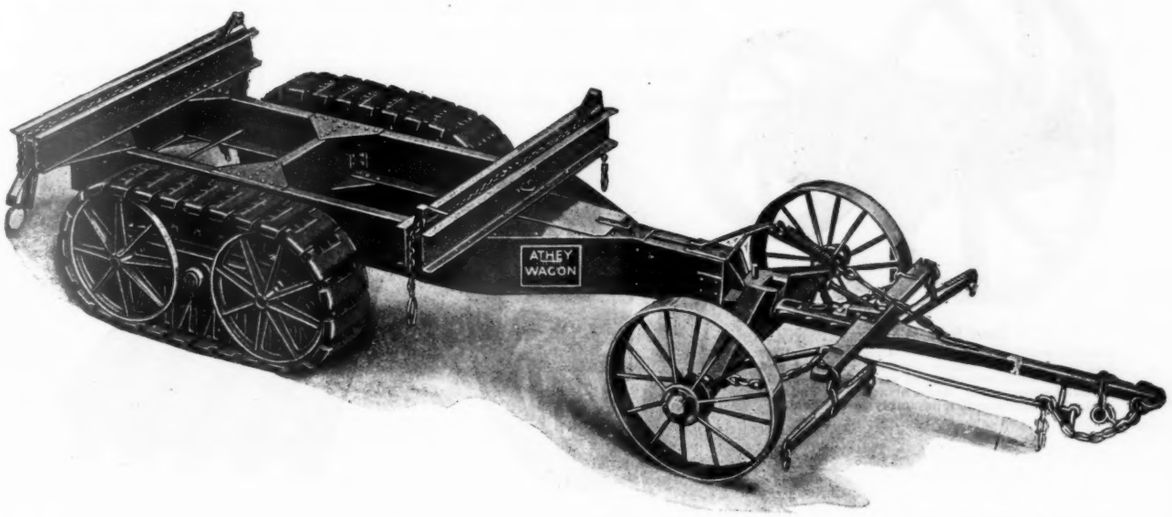
SUPREME MECHANICAL MERIT



The idea of the ATHEY TRUSS WHEEL is highly ingenious and so simple that it is hard to understand why someone did not think of it before.

The portion of this track carrying the load is always fully unfolded, rigid, level and at rest. Not a pin or hinge moves. Parts are subjected, therefore, to no friction while carrying the load. This greatly reduces wear and lengthens life of pins and bearings.



Wheels operate on roller bearings so that friction in the entire load-bearing unit is reduced almost to the vanishing point. Every detail of design and construction will be found to have been carefully profected. The result is that ATHEY equipment stands up under hard service for years, with little or no expense for repairs.

Capacity 10 tons. Ask for full particulars.

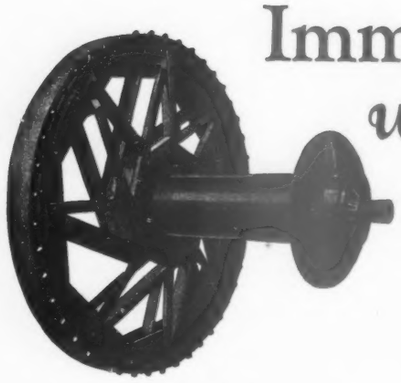
ATHEY TRUSS WHEEL COMPANY

130 N. Wells St., Chicago, U. S. A.

Cable Address—"Truswheel Chicago"

Baldwin Locomotive Works, Philadelphia, Pa., Export Agents

Immediate Economies *with* Steel Equipment

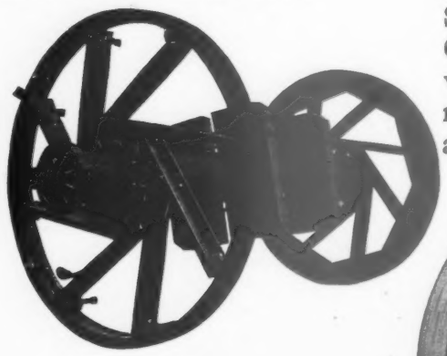


Steel Calf Wheel

Heavy bracing angles extend from each arm to each tug rim bolt. Tug rim is held firm and braced solid. It *can't* be pulled loose or out of line. Patented construction of the Pareelite* Shaft Hub insures a true-running, well-balanced wheel. Quick to assemble, long lasting.

Parkersburg Steel Drilling Equipment offers an opportunity to save initially—and in the long run. Immediately through reduction in operating costs. Eventually through durability over wood parts.

Parkersburg Steel Drilling Equipment includes complete Steel Drilling Rigs, Steel Derricks, Steel Bull Wheels, Steel Calf Wheels, Steel Band Wheels, Tug Pulleys and Steel Crown Blocks. All of these units are designed with a view to strength and durability and are made under conditions which insure accuracy and easy assembling in the field.

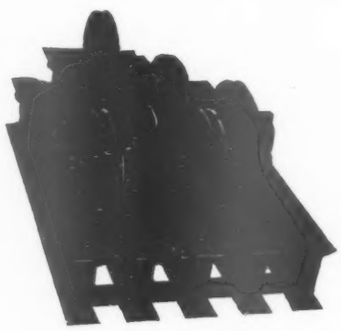


Steel Bull Wheel

Positive traction given by "V"-Grooved Pareelite* Tug Rim. Brake Cants securely clamped and bolted between two rings of steel Cants—easily replaced when worn. Arms attached to Tug and Brake Wheels for quick assembly in the field.

Steel Band Wheel

Made in standard diameters, faced for standard width belting. Steel Angle Arms, securely riveted to circles of Steel Cants and bolted to a Pareelite* Shaft Hub, eliminate the need of band wheel flanges. Furnished with metral Tug Pulley



Steel Crown Block

There is no worry about lubrication with Parkersburg Steel Crown Blocks. Cup grease rests directly on top half of trunnion and lubrication is continuous. There is *solid metal* between pulley trunnion and top flange of I-Beam. Pulley loads carried directly on the I-Beams.

***Pareelite is a "High Manganese" metal—not cast iron—that will sustain a load of 4320 lbs. on arbitration test bar of the American Society for Testing Materials, and with only 7/64th inch deflection at breaking point. It has an ultimate tensile strength of 33,680 lbs. per square inch.**
In elasticity, Pareelite approaches more nearly to cast steel than any other iron base metal.

When YOU buy Parkersburg Steel Equipment you not only insure savings in the long run but you profit by certain economies that can be effected immediately

The PARKERSBURG RIG & REEL COMPANY

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California Representatives, BUCK & STODDARD
485 California St., San Francisco, Calif.; Box 720, Arcade Station, Los Angeles, Calif.

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